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MODULATION

BY

JAMES HIGGS,

MUS. BAC., OXON.

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INTRODUCTORY.

In this Primer on Modulation an attempt is made to show something of that inter-relation of keys which is so prominent a feature in modern music, to exhibit some of the points of contact that unite various tonalities one to the other, and to show that no combination or chord so exclusively belongs to any one key that it cannot be employed in other keys.

The diatonic and chromatic contents of a key are therefore shown at the outset in somewhat of detail on the basis of the teaching of the late Professor Sir G. A. Macfarren. Tables are given, in which the fourfold use of triads or common chords is displayed, according as a chord being (*a*) diatonic in primary key is quitted as another diatonic chord of another key; (*b*) diatonic in primary key is quitted as chromatic in another key; (*c*) chromatic in primary, but quitted as diatonic in new key; or (*d*) being chromatic in primary, is quitted as another chromatic chord in another key.

The several most usual and potent chords of modulation are next passed in review. The essence of a modulation is held to consist in the sequence of dominant and tonic harmony in a new key, although the special classification of a modulation, whether transitory or cadential, must depend upon the length of stay in the new key, position of chords employed, place in rhythm, and probably many other considerations. The frequency and habit of modulation is so common in modern music, that the ear of the listener has become accustomed to groups of keys being associated and having their harmonies interchanged, so that much which, if technically analysed must be regarded as modulation, passes without recognition of the fact that the original key has been quitted.

In the early days of modern music the appearance of an accidental was the almost sure harbinger of a change of key, and, as the event was comparatively rare, the continuance was often proportionately long. Perhaps a useful comparison may be instituted between tonality in music and habits of travelling. Formerly when travelling was difficult, a journey of but a few miles involved time, thought, preparation and endurance, and the traveller, by loss of time, by fatigue and discomfort, had but too keen a sense of having been away from home. Now facilities for locomotion are so great, that breakfasting in London, one may easily travel a couple of hundred miles, transact business, and return in time to dine with little sense of having been away at all; but let the same man travel a quarter of the distance and *sleep* out of town (in fact make a "perfect cadence") and he will at once realize that he has been from home. The parallel holds good in tonality. Facilities, by use of chromatic harmonies and other means, are so great for combining features of different keys and passing out of a key, that often *only* those modulations which are truly cadential are regarded as departures from the principal key; this may be very natural, but it is hardly systematic or technically correct.

After the explanation of the nature and means of modulation a considerable collection of extracts from classical writers is added; each is annotated as seemed necessary. The extracts are taken generally from familiar works, in order that the student may derive further advantage from studying each example with its context. Two complete movements are also inserted, with detailed examination of the modulations, thus showing not only how, but when and where modulations are made. Next follows a set of modulations from C to each tonic above. The modulation is shown by five or six different methods in each case. The Primer concludes with a set of exercises, and its object will have been attained if any one who reads and studies it is induced to observe and tabulate for himself those wonderful possibilities which result from the inter-relationship of tonality, and are among the most distinguishing characteristics of modern music.

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MODULATION.

CHAPTER I.

MODULATION, in the modern acceptation of the term, is the art of passing from one key or scale to another.

A knowledge of modulation is of the greatest possible importance to the student, alike for the purpose of analysis, and construction. Before entering on the consideration of the varieties, signs, or means of modulation, it will be necessary to devote a few words to the consideration of the contents of a key, since it is essential that the chords possible in, or proper to, a key should be well understood before progress can be made in recognizing when or how a key is quitted.

At first it may seem that the integrity of a key can only be preserved by the exclusive use of notes belonging to the particular scale, but consideration of the very frequent employment of chromatic notes, especially in modern music, will at once show that the appearance of one or more accidentals does not, of necessity, indicate modulation. In the following example from Beethoven, it is evident the D♯ is a mere chromatic passing note that in no way affects the harmonic progression:—

Ex. 1.

As any single part may employ chromatic progressions, so certain definite foreign chords may be introduced into a key without necessarily producing modulation. The direction of modern musical thought and practice has been thus to extend the boundary of each individual key by affiliating to it some of the principal harmonies of neighbouring keys. Such chords, although more or less indicative of keys other than the primary key, if they do not reach the goal they threaten but return to the first key, are generally regarded as chromatic chords in that key—thus in the next example the chord marked * may seem to be borrowed from the key of E♭, but because it at once returns to a characteristic chord of the primary key, it is regarded as a chromatic chord in A♭.

Ex. 2.

So in the next example the chord * D in this context might seem to be the subdominant chord of the

submediant key A, but the unquestionable tonality of the harmony on either side of the chord referred to stamps it as a chromatic harmony in the primary key of C♯ minor.

Ex. 3.

The following tables are intended to exhibit, according to the teaching of the late Professor Sir G. Macfarren, the principal chords proper to, or possible in, a key. It is convenient to show the chords belonging to a minor key first and to class them as (*a*) diatonic concords, (*b*) diatonic discords, (*c*) chromatic concords, (*d*) chromatic discords. It will be observed that the leading note of a minor scale although expressed by an accidental is regarded as diatonic.

THE PRINCIPAL DIATONIC AND CHROMATIC CHORDS IN A MINOR KEY.

Ex. 4.

(*a*) Tonic triad and inversions.
(*b*) Subdominant triad and inversions.
(*c*) Dominant triad and inversions.
(*d*) Submediant triad and inversion.
(*e*) Inversion of diminished triad on 2nd of scale.
(*f*) Inversion of diminished triad on leading note.

Ex. 5.

(*a*) Dominant 7th and inversions.
(*b*) Dominant minor 9th, diminished 7th on leading note and other inversions.
(*c*) Dominant 11th and inversions.
(*d*) Dominant minor 13th and inversions.

---

† The leading note of a minor key although expressed by an accidental is accounted diatonic.

CHROMATIC CONCORDS.

Ex. 6.

(*a*) Triad on flat 2nd and inversion.

(*b*) Triad on supertonic and inversion.

CHROMATIC DISCORDS.

Ex. 7.

(*a*) Supertonic 7th and inversions.

(*b*) Supertonic minor 9th, diminished 7th on raised subdominant and other inversions.

(*c*) Supertonic 13th and inversions.

(*d*) Chromatic tonic 7th, 9th and 13th with inversions.

(*e*) Augmented 6th on flat 6th with inversions.

(*f*) Augmented 6th on flat 2nd with inversions.

THE PRINCIPAL DIATONIC AND CHROMATIC CHORDS IN A MAJOR KEY.

The chords shown as belonging to, or possible in, a major key are more in number than those shown in a minor key, since all chords shown here as proper to a minor key (except those derived from the tonic triad) are available in the major while the converse does not hold, the minor key is not enriched from the major.

DIATONIC CONCORDS.

Ex. 8.

(*a*) Tonic triad and inversions.

(*b*) Subdominant triad and inversions.

(*c*) Dominant triad and inversions.

(*d*) Supertonic triad and inversion.

(*e*) Submediant triad and inversion.

(*f*) Inversion of triad on leading note.

(*g*) Mediant triad and inversion.

* Chiefly used in sequence.

CHROMATIC CONCORDS.

Ex. 9.

(*a*) Triad on flat 6th and inversion.

(*b*) Triad on flat 2nd and inversion.

(*c*) Chromatic triad on supertonic and inversion.

(*d*) Minor triad on subdominant and inversions.

(*e*) Inversion of diminished triad on supertonic of minor scale.

DIATONIC DISCORDS.

Ex. 10.

(*a*) Dominant 7th and inversions.

(*b*) Dominant major 9th and inversions.

(*c*) Dominant 11th and inversions.

(*d*) Dominant 13th and inversions.

CHROMATIC DISCORDS.

Ex. 11.

(*a*) Supertonic 7th and inversions.

(*b*) Supertonic minor 9th, diminished 7th on raised subdominant and other inversions.

(*c*) Supertonic major 9th, 7th on raised subdominant and other inversions.

(*d*) Supertonic minor 13th and inversions.

(*e*) Supertonic major 13th and inversions.

CHROMATIC DISCORDS (continued).

Ex. 12.

(*a*) Tonic chromatic 7th and inversions.

(*b*) Tonic minor 9th diminished 7th on mediant and other inversions.

(*c*) Tonic major 9th and inversions.

(*d*) Tonic minor 13th and inversions.

(*e*) Tonic major 13th and inversions.

(*f*) Augmented 6th on flat 6th with inversions.

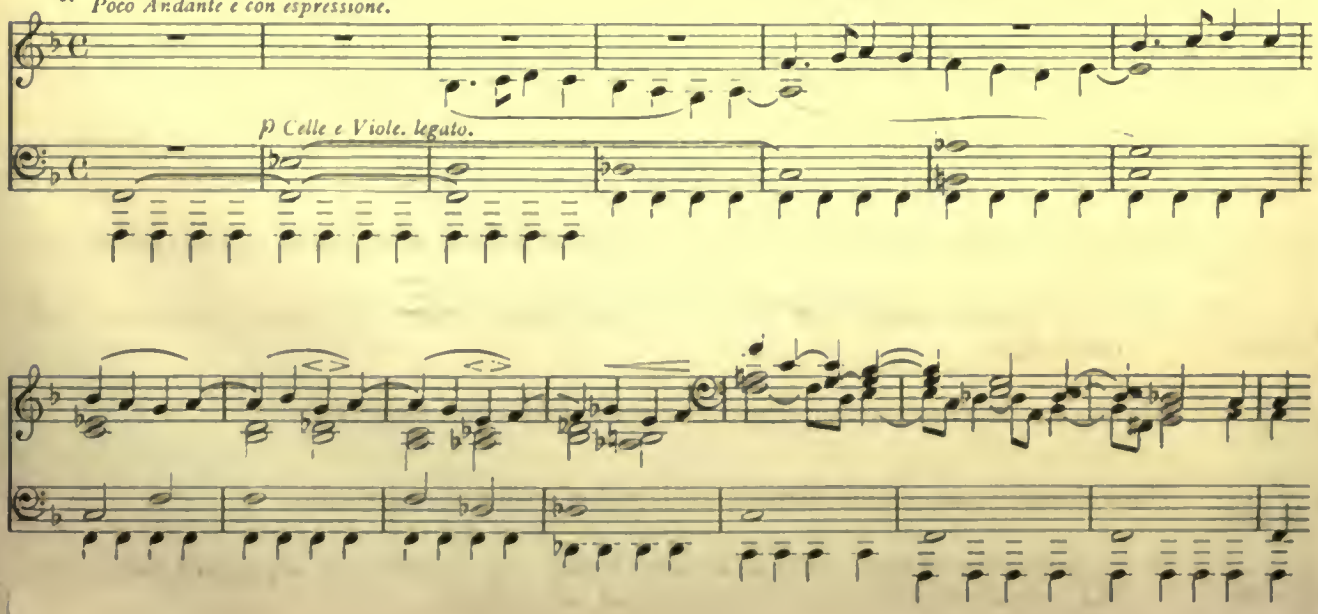
(*g*) Augmented 6th on flat 2nd with inversions.

So long as the chords enumerated above are employed with the restriction that each chromatic harmony is followed by a harmony diatonically characteristic of the primary key or by another, but antagonistic, chromatic harmony no modulation is made; on the other hand whenever chords proper to, or possible in, a new key are confirmed by the use of dominant and tonic harmony of such new key, modulation takes place.

The following examples of the use of chromatic harmonies will be instructive. It will be seen, though abounding in the use of accidentals, no real modulation occurs in either extract.

JOHANNES BRAHMS, from the "Requiem," Op. 45.

1. *Poco Andante e con espressione.*



II. From SCHUBERT'S Mass in E♭.

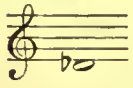
Andante con moto, quasi Allegretto.

III. JOHANNES BRAHMS, Op. 45.

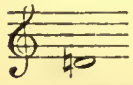
SUMMARY,

NAMING THE SEVERAL HARMONIES OF WHICH EACH NOTE OF THE CHROMATIC SCALE OF C FORMS A PART.

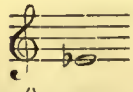
Root of tonic series, third of triad on flat sixth and of augmented sixth, fifth of subdominant, seventh of supertonic series.



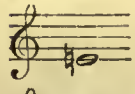
Root of chromatic chord on flat 2nd, bass of augmented 6th, minor 9th of C (tonic minor 9th).



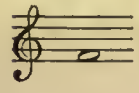
Root of chromatic supertonic series, root of diatonic supertonic, 5th of dominant, tonic major 9th.



Minor 9th of D♭ (chromatic supertonic 9th), part of dominant minor 13th.



Third of tonic series, root of diatonic triad, part of dominant major 13th.



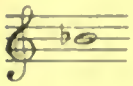
Root of subdominant triad major and minor forms, 3rd of triad and augmented 6th on flat 2nd, 7th of dominant, 3rd of diatonic triad on supertonic.

Third of chromatic supertonic series, part of augmented 6th on flat 6th.

Root of dominant series, 5th of tonic series.

Root of triad, 3rd of minor form of subdominant, 5th of chromatic chord on flat 2nd bass of augmented 6th, minor 9th of dominant.

Root of diatonic triad, 3rd of subdominant, 5th of supertonic series, 13th of tonic.



7th of tonic chromatic series.

3rd of dominant series, 6th on flat 2nd.

As each note of the chromatic scale is here shown as forming part of various chords available in the scale of C, and as these same notes (although sometimes under other names) are the constituents of every other chromatic scale, it follows that every note has not only its power of combination, as here exhibited, but, under the condition of becoming other degrees of other chromatic scales, the whole of the combinations shown among the twelve degrees are really applicable to each degree.

CHAPTER II.

MODULATION as regards the key to which it may be made is divided into (*a*) Natural Modulation and (*b*) Extraneous Modulation.

Natural Modulation is where we pass from a given key to either of its attendant keys; Extraneous Modulations are modulations to keys other than the attendant keys.

The attendant keys are those having the same signature as a given key, or one sharp or flat, more or less; in other words the attendants are *the* relative (minor or major), the dominant and subdominant keys and their relatives (minor or major).

In the following diagram major keys are indicated by capitals and minor keys by small letters.

EXAMPLES.

KEY OF F ← C → G; ↓ d a e

KEY OF E♭ ← B♭ → F; ↓ c g d

KEY OF G ← D → A; ↓ e b ♯f

KEY OF d ← a → e; ↓ F ← C → G

KEY OF c ← g → d; ↓ E♭ B♭ F

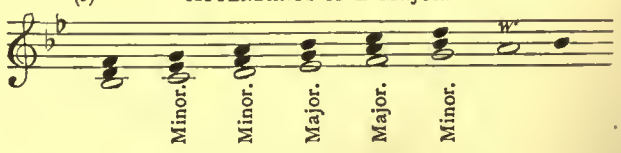
KEY OF e ← b → ♯f; ↓ G D A

The final chords of all these keys will be found among the notes of the primary scale, but the seventh note of the ascending major scale and the seventh note of the descending minor scale cannot be tonics, because the scale does not furnish a perfect fifth to such notes.

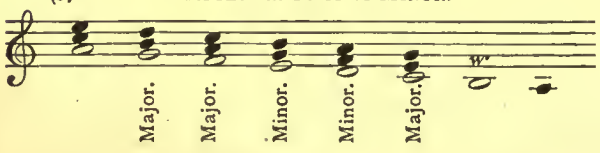
Ex. 13.

(*a*) ATTENDANTS OF C MAJOR.

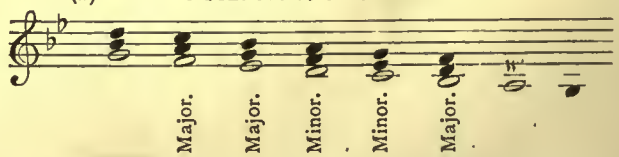
(*c*) ATTENDANTS OF B MAJOR.



(*b*) ATTENDANTS OF A MINOR.



(*d*) ATTENDANTS OF G MINOR.



The importance of the modulation will largely depend on the form and position of the dominant and tonic chords: if they are both in root position and coincident with the end of a phrase the modulation is felt to be important; if either of these characteristics be wanting the modulation is less important; but it should be noted that important modulations are often *made* in an incidental way but confirmed by the use of more important positions of the necessary harmonies at the appropriate point.

Modulation is transient or complete. The form of the chords employed whether having the root in the bass, or being inversions, the length of the modulation and its place in the rhythm are all important

factors in determining to which class any modulation belongs; an example will best show how to distinguish modulations in this respect:

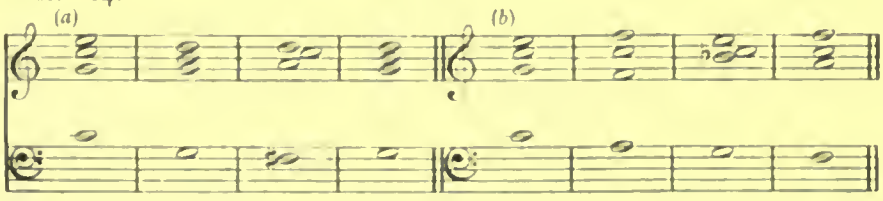
GOUNOD.

In the above extract we have in the first bar a transitory modulation from B♭ to E♭. We know the key to be B♭ from the bass note which from the law of inertia the mind naturally regards as a tonic. We recognize a modulation by the succession of dominant and tonic harmonies in another key, both chords being however in inverted position, occurring at an unimportant part of the rhythm and of very short duration, it is a transitory modulation: in contrast with this the cadential modulation into C minor at the end of the extract where the several harmonies have been converging upon and defining the new key. The particular form of the bass A♭, F, G, the notes on either side of the dominant proclaiming its importance; the $\frac{6}{5}$ on the sub-dominant pointing to those of experience the coming cadence as plainly as if already heard. These are among those habits of progression which the student cannot too closely observe.

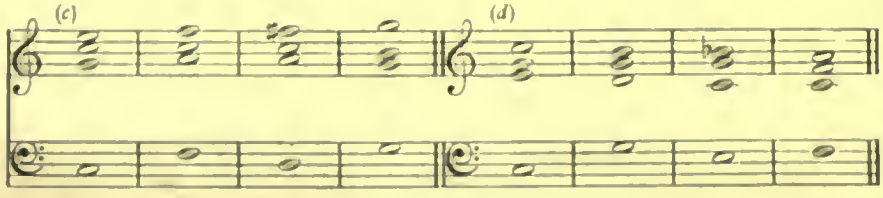
Natural modulation may be either gradual or sudden. It is gradual when it is approached through a chord that belongs both to the primary key and also to the key of modulation. It is sudden or abrupt when the chord that precedes the modulating chord does not belong to the new key. The following examples are from Sir John Goss:—

EX. 14.

GRADUAL.



SUDDEN.

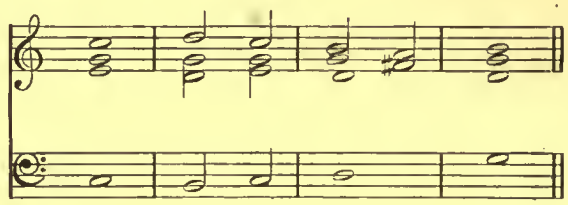


The modulation at *(a)* is gradual because the second chord belongs both to the key of C and of G. The modulation at *(b)* is gradual for a similar reason. The second chord belongs both to the key of C and also to F. On the other hand at *(c)* the modulation is *sudden* because the second chord belonging to the key of C does not belong to the key of G, and at *(d)* the second chord belonging to the key of C does not belong to the key of F.

Modulation as concerns its means is either diatonic, chromatic, or enharmonic. In diatonic modulation some chord is found which is common as a diatonic chord, both to the original key and to the key of modulation. In the following example while the first three chords are in the key of C and the last three

in the key of G, the third chord is really approached as the tonic chord of C, but quitted as the subdominant of G, it is therefore common to the two keys.

Ex. 15.



In chromatic modulation, a note or chord is taken which is chromatic either to the primary key or to the key of modulation. In the next example, allowing the first chord to indicate the key of C, the second is chromatic in that key (minor triad on subdominant), but it proves to be also the minor chord on the second of E♭.

Ex. 16.

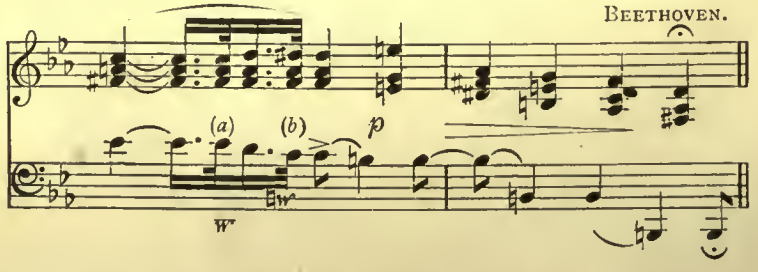
In the next example the fourth chord diatonic in the key of C, is discovered to be the chromatic supertonic triad in the key of B♭.

Ex. 17.

Enharmonic modulation is that in which by reason of a change of name of one or more notes of a chord, the sound or sounds remaining, the several notes of such chord become other degrees of another scale, with new associations and obligations.

In the subjoined extract at (*a*) we have a chord of minor 9th on D as a root; at (*b*) immediately after we have the same sounds, only that which was called E♭ is now D♯, the root is changed to B, and we pass into the key of E minor.

Ex. 18.



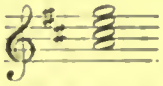
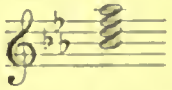
In connection with the subject of enharmonic change, it may be useful to point out that a change of *all* the notes of a chord, from a sharp to a flat notation, is not enharmonic modulation, as it is sometimes inaccurately called. In the following example the distance from A♭ minor to E major looks very wide, but

it is evident the composer might have written the first bar as a chord of G♯ minor, when the progression to the chord of B would have been quite simple. Of course, Beethoven was led to express the first chord of the extract as he has done, by reason of the previous context.

Ex. 19.

The chord of the dominant 7th, as one of the most frequent means of modulation, must receive a little special attention. This chord contains what may be termed the two characteristic, or limiting, notes of the scale (*i.e.* the leading note and the sub-dominant). When this chord is followed by the tonic triad the key is fully defined; hence the well-known rule of modulation: "The new key is entered through its dominant." It is true the new key may be indicated by other chords, and certain habits of progression are often influential in introducing modulation, yet in all cases dominant harmony, in some form, is essential to establish and confirm the new key.

The power of the dominant 7th to define the key is due, as stated above, to its containing the limiting notes of the scale. The chord cannot *diatonically* belong to any other key than C, because if it belonged to any other key than C, it must belong to a key requiring either sharps or flats in its signature. If a key with sharp signature, there must be at least one sharp, and that would be F♯, but here we have F♮, so the chord cannot diatonically belong to a key with a sharp signature. If, in the same way, we examine keys with flat signatures, such keys must have at least one flat, and that would be B♭; but here the note is B♮, so the chord cannot diatonically belong to a key with a flat signature, and must, therefore, be in C.

Of course it is the same with corresponding chords in other keys, thus in the chord  C♯ asserts the key has at least two sharps, while the G♮ declares it has not three. The key, therefore, to which the chord diatonically belongs is D. So again in this chord  A♭ asserts the key has at least three flats, while the D♮ declares it has not four. The key, therefore, is E♭.

Whatever has been said as to the key-defining character of the dominant 7th applies with equal force to the whole series of dominant discords, the minor and major 9th, and the derived chords of leading and diminished 7ths, &c.

CHAPTER III.

By far the largest number of modulations are effected either (*a*) by finding a chord common to the two keys, or (*b*) by finding chords which, although belonging to different keys, have at least one common note.

Dealing with the case of chords common to two keys, it will be instructive to examine in detail the manner in which common chords may be related to one another; four cases arise :—

(1) A diatonic chord may become some other diatonic chord in another key.

(2) A diatonic chord may become a chromatic chord in another key.

(3) A chromatic chord may become a diatonic chord in another key.

(4) A chromatic chord may become some other chromatic chord in another key.

The tables of chords which follow are confined to the employment of major chords, because they are far more valuable for the purpose of modulation than minor chords, and to have included minor chords would have extended the tables to an unnecessary length. Only one form of the final chord is given, according to the nearness of relationship; but as every dominant is, as a mere chord, equally the dominant of the major and minor form of the tonic, the number of examples may be considered as doubled.

MAJOR DIATONIC CONCORDS CHANGED INTO OTHER DIATONIC CONCORDS OF OTHER KEYS.

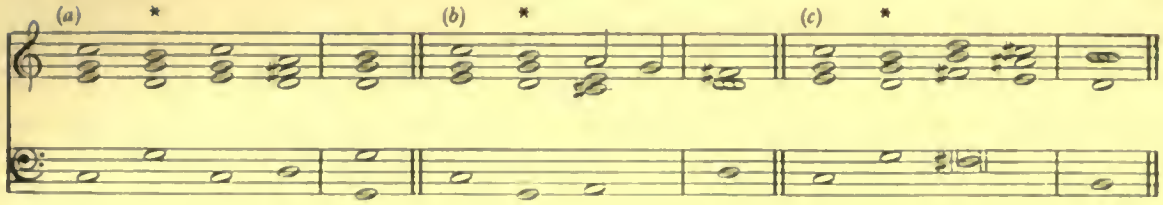
Ex. 20.

(*a*) Tonic quitted as subdominant of new key.
(*b*) Tonic quitted as dominant of new key.
(*c*) Tonic quitted as sixth degree of new key.

Ex. 21.

(*a*) Subdominant quitted as tonic of new key.
(*b*) Subdominant quitted as dominant of new key.
(*c*) Subdominant quitted as sixth degree of new scale.

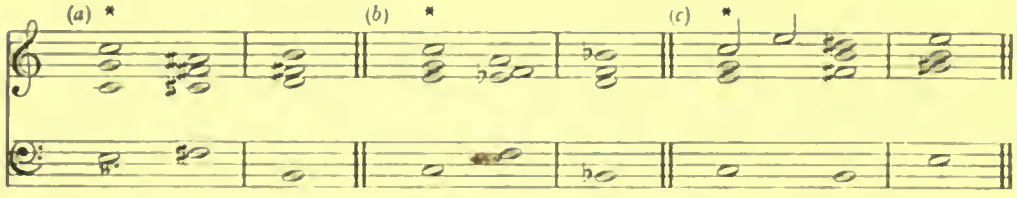
Ex. 22.



(*a*) Dominant quitted as tonic of new key.
(*b*) Dominant quitted as subdominant of new key.
(*c*) Dominant quitted as sixth degree of new key.

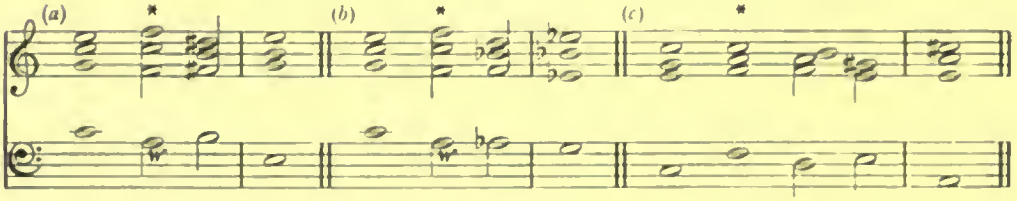
MAJOR DIATONIC CONCORDS CHANGED INTO CHROMATIC CONCORDS OF OTHER KEYS.

Ex. 23.



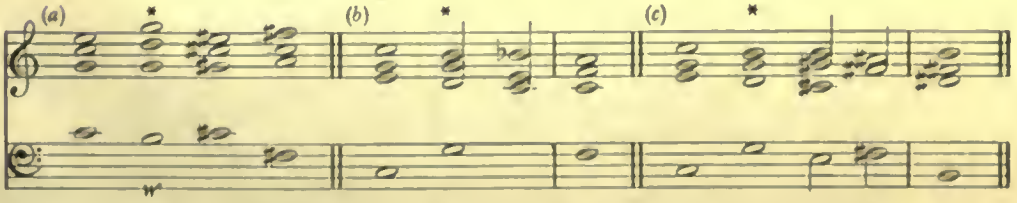
(*a*) Tonic quitted as flat 2nd of new key.
(*b*) Tonic quitted as chromatic supertonic of new key.
(*c*) Tonic quitted as flat 6th of new key.

Ex. 24.



(*a*) Subdominant quitted as flat 2nd of new key.
(*b*) Subdominant quitted as chromatic supertonic in new key.
(*c*) Subdominant quitted as flat 6th in new key.

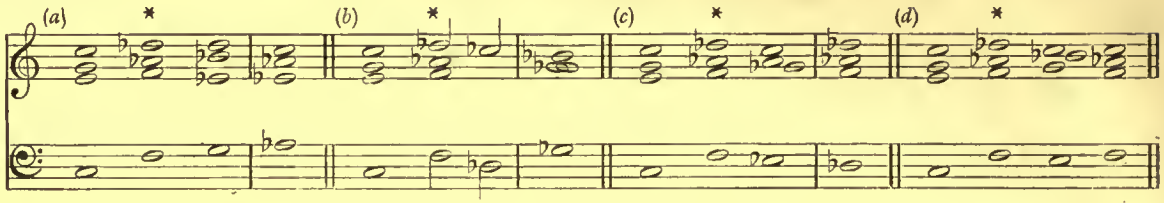
Ex. 25.



(*a*) Dominant quitted as flat 2nd of new key.
(*b*) Dominant quitted as supertonic of new key.
(*c*) Dominant quitted as flat 6th of new key

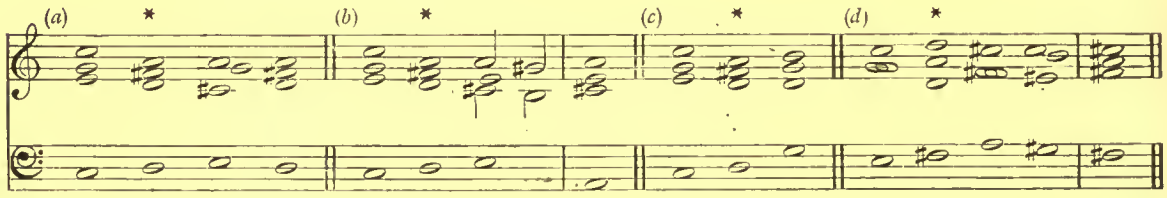
CHROMATIC CONCORDS CHANGED INTO DIATONIC CONCORDS OF OTHER KEYS.

Ex. 26.



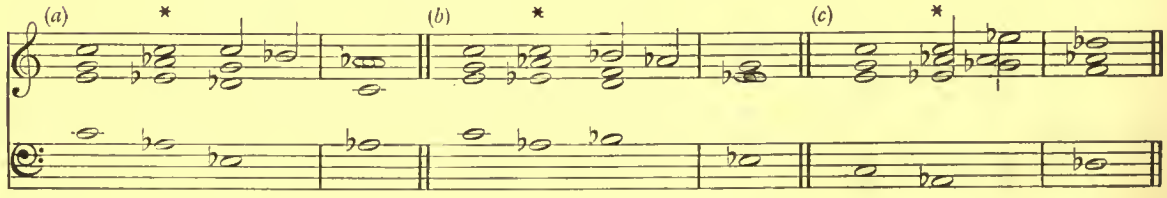
(*a*) Flat 2nd quitted as subdominant of new key.
(*b*) Flat 2nd quitted as dominant of new key.
(*c*) Flat 2nd quitted as tonic of new key.
(*d*) Flat 2nd quitted as flat 6th of new key.

Ex. 27.



(*a*) Chromatic supertonic triad quitted as tonic of new key.
(*b*) Chromatic supertonic triad quitted as subdominant in new key.
(*c*) Chromatic supertonic triad quitted as dominant in new key.
(*d*) Chromatic supertonic quitted as flat 6th in new key.

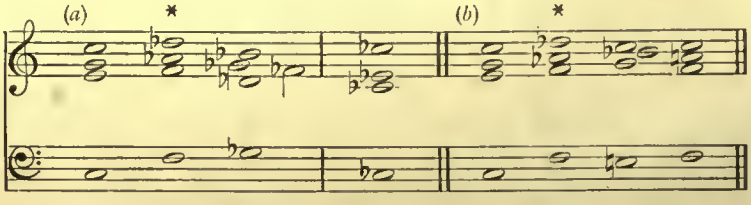
Ex. 28.



(*a*) Flat 6th quitted as tonic of new key.
(*b*) Flat 6th quitted as subdominant of new key.
(*c*) Flat 6th quitted as dominant of new key.

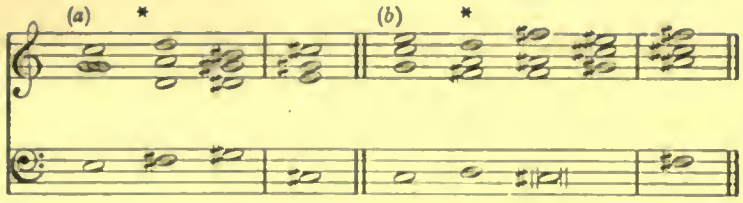
CHROMATIC CONCORDS OF PRIMARY KEY CHANGED INTO OTHER CHROMATIC CONCORDS OF OTHER KEYS.

Ex. 29.



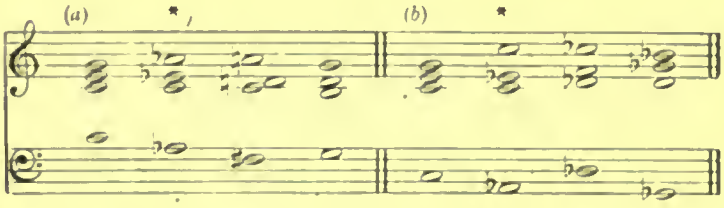
(*a*) Flat 2nd quitted as chromatic supertonic of new key.
(*b*) Flat 2nd quitted as flat 6th of new key.

Ex. 30.



(*a*) Chromatic supertonic quitted as flat 2nd of new key.
(*b*) Chromatic supertonic quitted as flat 6th of new key.

Ex. 31.

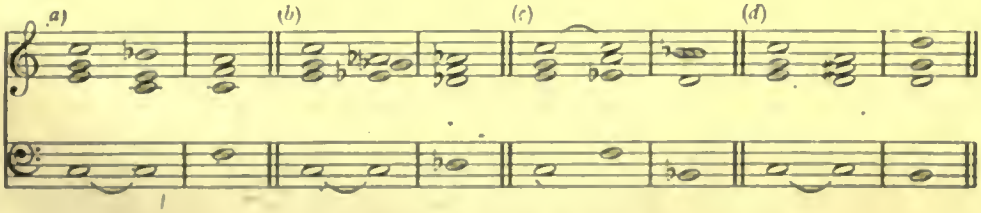


(*a*) Flat 6th quitted as flat 2nd of new key.
(*b*) Flat 6th quitted as chromatic supertonic of new key.

In the foregoing paragraph and examples, connection of keys has been shown by an entire chord being retained,* but used on a different degree of the scale from that on which it was originally employed. A method of modulation will now be shown wherein a single note of a chord is retained as a note of dominant harmony of a new key. For simplicity the first chord used shall be the tonic triad, and the dominant chord in which it is retained shall be a dominant 7th, but the principle is capable of far wider application, since any note of an unprepared discord may remain to become any other note of any other unprepared discord: thus root may change to 3rd, 5th, 7th, minor or major 9th, 11th, minor or major 13th; so the third may change to root, 5th, 7th, 9th, &c., and so of every other note.

MODULATIONS BY RETAINING ROOT AS NOTE IN NEW DOMINANT HARMONY.

Ex. 32.



(*a*) Root retained as root of new dominant.
(*b*) Root retained as 3rd of new dominant.
(*c*) Root retained as 5th of new dominant.
(*d*) Root retained as 7th of new dominant.

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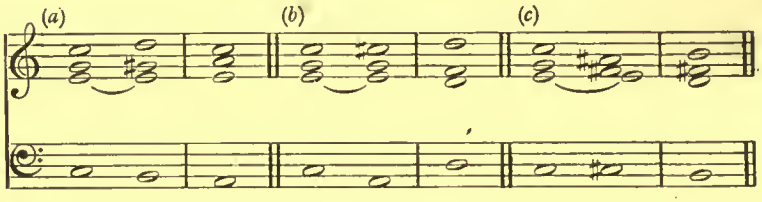
* It is convenient to say "retained." The reader must regard each chord marked * as split in two, the first half being the described chord in the original key, and the second half as that indicated in the new key.

MODULATIONS BY RETAINING THIRD OF PRIMARY TONIC AS NOTE OF NEW DOMINANT HARMONY.

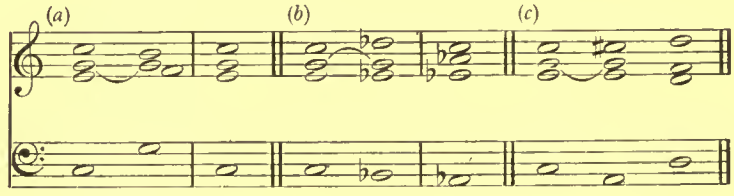
Ex. 33.



(*a*) Third of first chord retained as root of second.
(*b*) Third of first chord retained as 5th of second.
(*c*) Third of first chord retained as 7th of second.

MODULATIONS BY RETAINING FIFTH OF PRIMARY CHORD AS NOTE OF NEW DOMINANT HARMONY.

Ex. 34.

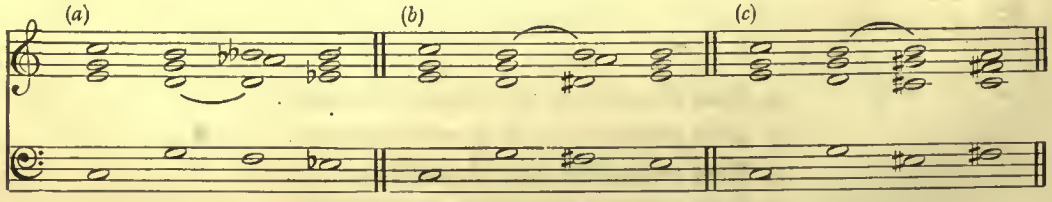


(*a*) Fifth of first chord retained as root of dominant.
(*b*) Fifth of first chord retained as 3rd of second chord.
(*c*) Fifth of first chord retained as 7th of second.

It will be seen that each tonic, except that of the minor or major 3rd, and of the augmented 4th (*i.e.* in the key of C the keys of E♭, E♮, and F♯), may be directly reached if one or other of the notes of the original tonic triad be retained as a note of new dominant harmony. These three may be conveniently reached by retaining a note of the primary dominant triad.

MODULATIONS BY RETAINING NOTE OF DOMINANT TRIAD AS NOTE OF NEW DOMINANT HARMONY.

Ex. 35.



(*a*) Fifth ot dominant triad retained as 3rd of new dominant chord.
(*b*) Third of dominant triad retained as root of new dominant chord.
(*c*) Third of dominant triad retained as 7th of new dominant chord.

CHAPTER IV.

Modulation to remote keys is often effected by two or more steps; this is called Compound Modulation. For the purpose of compound modulation the mode of a tonic may be changed, and modulations made to the attendants of the new key. In the following example E major changes to E minor, and modulation is made to C major and B minor, both attendants of the new key.

Ex. 36.

BEETHOVEN, Op. 27.

The above change is often made, and another familiar example may be quoted. The change in this case is from B major to B minor, but with the common dominant intervening. Notice the third bar.

BEETHOVEN, Op. 31.

Ex. 37.

A change is sometimes, but more rarely, made from minor to major. The next extract, from a violin sonata by Mozart, will illustrate this:—

W. A. MOZART.

Ex. 38.

The change, as shown above, from minor to major *direct* is not very frequent; but, effected through the dominant, common alike to the minor and major, the change is very familiar.

BEETHOVEN. "Finale." Op 10, No. 1.

39.

Compound modulations are often made through the minor form of the subdominant of a major key and then on to one or other of its relatives. See Examples by Mozart and Beethoven.

MOZART. "Jupiter" Symphony.
Arr. by HUMMEL.

Ex. 40.

In the above Example (40) the tonic chord of C is followed by the minor form of subdominant and further modulation to D♭ attendant of F minor. The return is really by the dominant 7th on A♭ being treated as augmented 6th in C major.

BEETHOVEN. Scherzo, 2nd Symphony.
Arr. by HUMMEL.

Ex. 41.

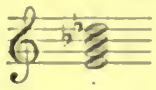
The new tonic A being established is followed by minor form of subdominant of that key. The modulation afterwards continues to B♭, relative of D minor.

CHAPTER V.

ENHARMONIC MODULATION.

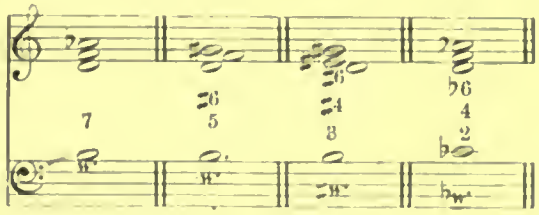
The general nature of enharmonic modulation has been already explained (*see* page 10). The most important chords employed in this way are (*a*) the diminished 7th, the augmented 5th or minor 13th, the augmented 6th, and dominant 7th.

The diminished 7th, as is well known, arises from the chord of the minor 9th with its root omitted, the chord thus consists of three minor thirds superposed one on the other.



This chord, or any other diminished 7th may, according to the notation used, be expressed either as a 7th, $\frac{6}{5}$, $\frac{4}{3}$, or $\frac{4}{2}$, with the result that the root of the chord will be different in each case.

Ex. 42.



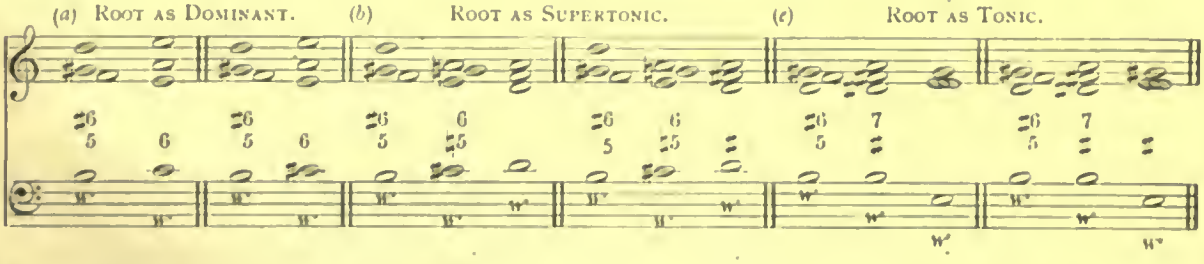
As each root may be dominant, supertonic, or tonic of either a major or minor key, we have 4 roots × 3 possible positions of chord × 2 modes = 24; so by this one chord we may modulate directly into every major and minor key, as shown in the next table.

Ex. 43.

(*a*) Root as Dominant. (*b*) Root as Supertonic. (*c*) Root as Tonic.

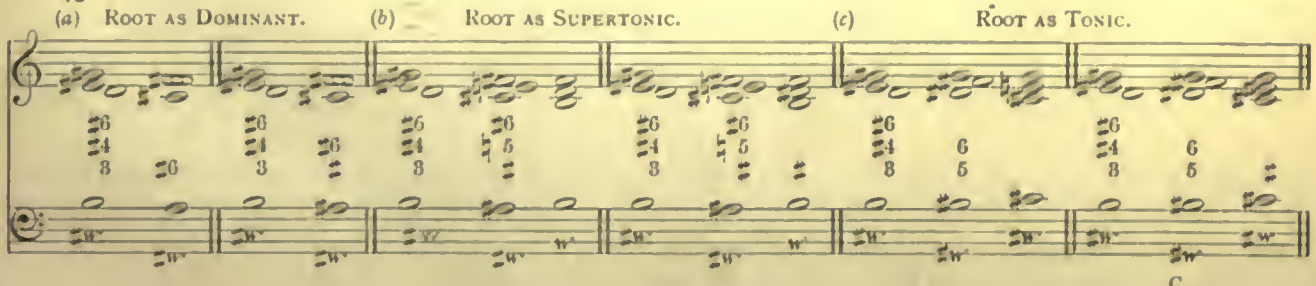
Ex. 44.

(*a*) Root as Dominant. (*b*) Root as Supertonic. (*c*) Root as Tonic.



Ex. 45.

(*a*) Root as Dominant. (*b*) Root as Supertonic. (*c*) Root as Tonic.



Ex. 46.

It is worthy of notice that there are only three essential varieties of this chord on a pianoforte or other keyed instrument, as the following example will make plain :—

Ex. 47.

It will be seen that the chords written in semibreves ascend semitonically, and that the first inversions of each of these chords continue the ascent, and the second inversions still carry through the process, which may be prolonged through the whole compass of the keyboard.

The three chords given above may be expressed in no less than sixty varieties of notation, having regard to the variety of accidental required, according to key, position, and mode.

The first of the above chords, as :—

Ex. 48.

It will be observed the above table contains twenty-four varieties of notation, but the third and sixth of each set are identical, so there are twenty varied notations of the first chord. There will, of course, be the same for each of the other original chords, making sixty varieties of notation for the three chords. These, may, under suitable circumstances, be interchangeable one for the other. The combination taken, say as a diminished 7th on the leading note of C major, may be quitted as either of the other twenty-three chords.

The immense power of the diminished 7th, as a modulating chord, is due to the fact that every possible dominant, supertonic or tonic, is either already a note present in the chord, or, at most, may be reached by upward or downward semitonic movement of one or other of its notes.

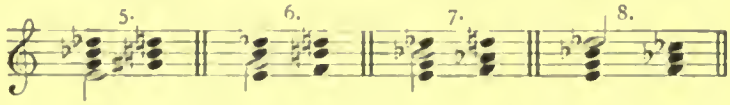
Three cases arise—(*a*) one note may fall a semitone while the others remain, and the chord becomes a dominant 7th, or an inversion of a dominant 7th; (*b*) one note may remain, and the others, each rising one semitone, the chord again becomes a dominant 7th, or an inversion of a dominant 7th; (*c*) one note may rise and the other notes adjust into some form of a tonic chord, the raised note becoming the dominant.

Ex. 49.

(*a*)

1. Dominant of A♭. 2. Dominant of C♭.
3. Dominant of D. 4. Dominant of F.

(*b*)



5. Dominant of A. 6. Dominant of C.
7. Dominant of E♭. 8. Dominant of G♭.

(*c*)

9. Tonic chord of B♭. 10. Tonic chord of D♭.
11. Tonic chord of F♭. 12. Tonic chord of G.

In Nos. 1 to 4 the *lowered* note is shown in minim notation. In Nos. 5 to 8 the *retained* note is shown in minim notation. In Nos. 9 to 12 the *raised* note is shown in minim notation. In every case the altered or retained minim is the dominant.

Diminished 7ths may follow one another chromatically, the whole chord rising or falling together, as in the following example, where the chords are respectively built on tonic, supertonic, and dominant roots in the key of A:—

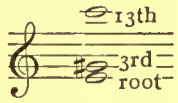
Ex. 50.

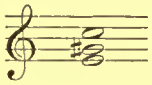
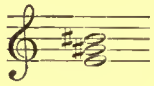
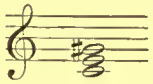
In the first movement of the symphony in C minor, Beethoven writes:—

Ex. 51.

When it is remembered that a chord of diminished 7th may be taken on either of three degrees of the scale (on leading note, on raised subdominant, or on major 3rd), it may be necessary to give a word of caution lest the too great facility with which it may be used, induces an undue frequency in its employment.

The simplest form of the chord of minor 13th (root, 3rd and 13th) is a chord having somewhat similar powers to that of the diminished 7th, and for a similar reason, the equidistance of its several notes (here of equivalent magnitude to major 3rds) which allows of corresponding but more limited enharmonic variation.

The chord 

when brought close  is not unfrequently written as an augmented 5th  ; such the original chord truly is when inverted 

According to the notation employed, either note may be root, 3rd or 13th, and this on either of three degrees, viz., dominant, supertonic, or tonic; and the chord on each of these degrees is the same in both the major and minor modes, hence we have 3 roots × 3 degrees of the scale × 2 modes, 3 × 3 × 2 = 18 different resolutions.

The three aspects of the given chord are—

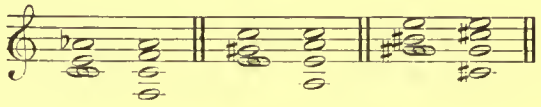
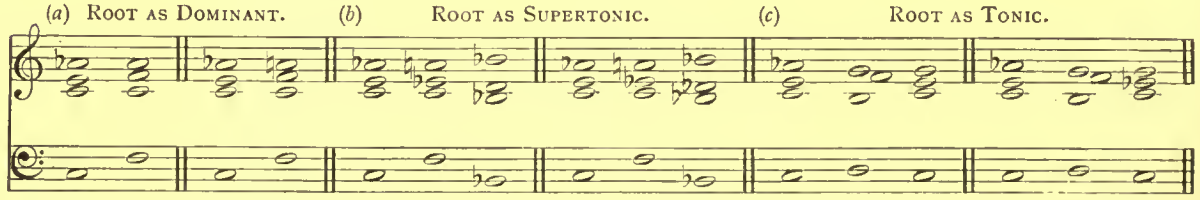
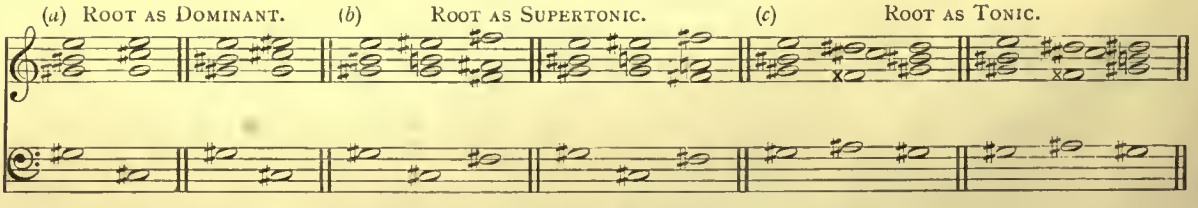
Ex. 52. 

TABLE OF ENHARMONIC VARIATIONS OF MINOR THIRTEENTH.*

Ex. 53. 

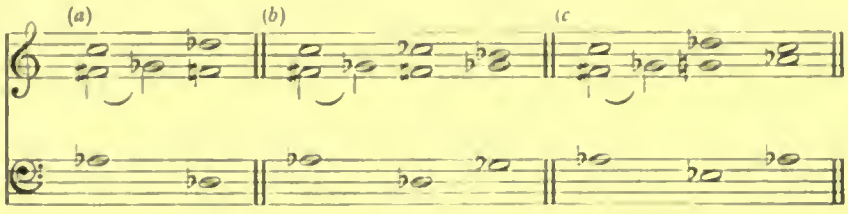
Ex. 54.

Ex. 55. 

* The position of the chord has been changed with each change of root, in order that the chord may appear in an effective position.

It remains to notice the enharmonic change of the augmented 6th into the minor 7th, or conversely, the change of a minor 7th into an augmented 6th. The seat of the augmented 6th is upon the sixth degree of a minor key, or on the flattened 6th of the major key, or upon the flat 2nd of the scale; when changed into a 7th, such 7th may be either dominant, supertonic, or tonic of the new key:—

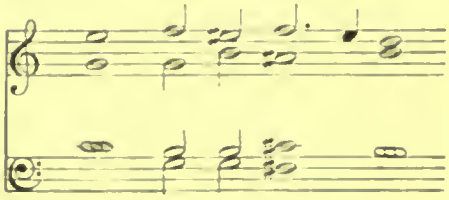
Ex. 56.



(*a*) Augmented 6th becomes dominant 7th of new key.
(*b*) Augmented 6th becomes supertonic 7th of new key.
(*c*) Augmented 6th becomes tonic 7th of new key.

or, conversely, a 7th may be changed into an augmented 6th:—

Ex. 57.

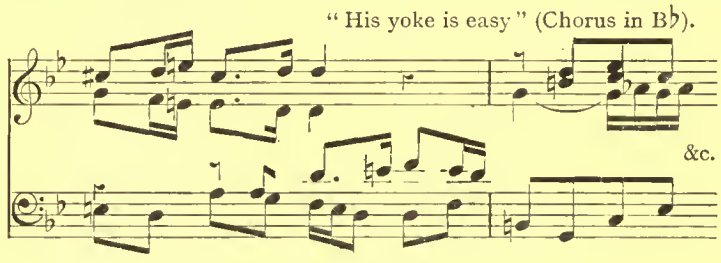


CHAPTER VI.

Having now passed in review some of the principal means of modulation, it will be interesting and profitable to examine a few extracts from the works of great composers, and to observe how they have employed the means which have been described. Before doing so, it may be well to explain the importance of observing the conditions under which modulations occur.

Extraneous modulation most frequently takes place, not as a departure from the primary key, but as departures from related keys. The free fantasia, or development section of the duplex form, is the place of all others where we are most likely to meet with remote modulations. Again we often find keys in near juxtaposition that seem remote, while in reality they are natural modulations from a common principal key. The following extract from Handel shows a transition from D minor to C minor. For the moment it may look like an example of extraneous modulation, but on examination it is seen that each of these scales is related to the primary key B♭ :—

Ex. 59.



EXAMPLES OF MODULATION FROM THE WORKS OF GREAT MASTERS.

I.—B♭ to B minor.

The original key is D major. A well-established modulation is made to B♭. This note is enharmonically changed into A♯, leading note of B minor.

II.—From A to B♭.

The key of A being reached at the end of the first section, the note A is retained as leading note of B♭. The modulation is subsequently fully established.

III.—A minor to B♭.

MOZART, Sonata in D.

This example shows major followed by minor. The subsequent progression shows root and 3rd retained as 3rd and 5th in the dominant harmony of the flat 2nd.

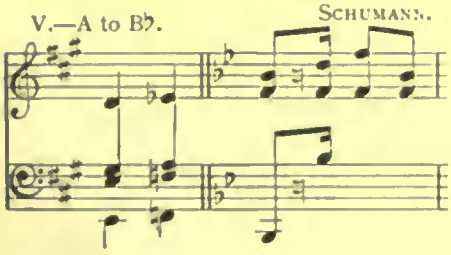
IV.—D major through A minor to E minor.

HANDEL, Overture to "Lotharius."

Notice here, going beyond, and reaching the key to which the ultimate modulation is made from the other side, A minor, first reached, is evidently more distant from D than E minor. A minor is reached by substituting the minor for the expected major chord on the dominant.

V.—A to B♭.

SCHUMANN.



Disregarding the consecutives and the resolution in another region, the progression is clear if regarded as a dominant 7th, followed by an augmented 6th, enharmonically changed into another 7th.

VI.—F to G♭ and back to original key.

BEETHOVEN, Op. 35.

Tonic becomes leading note of new key; afterwards, 3rd of G♭ becomes 7th of C as dominant in F, as is often the case in resolution of Neapolitan 6th.

VII.—D minor to E♭.

Retained notes root and 3rd of tonic chord becoming 3rd and 5th of new dominant, combined with chromatic movement. The 7th on B♭ appears, at first, to the ear as an augmented 6th in D minor.

VIII.—C to D♭.

Augmented 5th (tonic 13th) becomes new dominant.

IX.—C minor to D♭.

Inversion of chord on 6th degree of C becomes inversion of new dominant of D♭.

X.—A minor to B minor.

Here there is no note in common, but the 6th on A, sounding like a Neapolitan 6th in E minor, is followed at once by an augmented 6th in B minor.

XI.—B♭ minor to C minor (both attendants of original key).

In this modulation there is neither a chord common to both keys nor a note common to both chords. A♭, taken as flat 7th in a descending scale from B♭, is discovered to be the flat 6th bearing an augmented 6th in the scale of C minor.

XII.—A♭ to B (major followed by minor). SCHUBERT, Op. 55.

This chord is an enharmonic variation of the chord on flat 6th of scale of A♭, requiring notation of F♭ and C♭. The major is exchanged for the minor of the same root, which is subdominant in B minor.

XIII.—G minor to B♭. BEETHOVEN, Op. 79.

Chord of G tonic in original key is quitted as sixth in B♭.

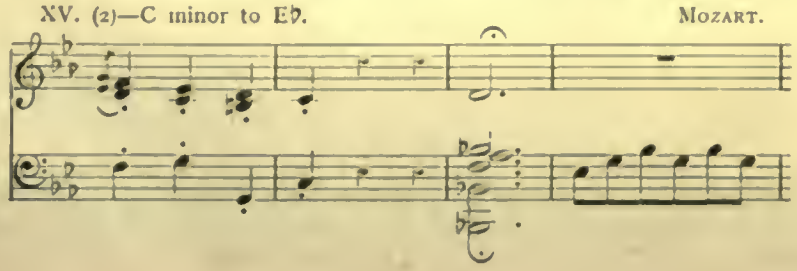
XIV.—C minor to E♭. BEETHOVEN, Op. 111.

* B♭, which gives the first indication of change of key, is, however, the melodic minor 7th of C minor, and only at † do we get real dominant harmony; inversion of major 9th, root B♭, and this is an equivocal chord. It might have proved a 7th on second of scale of C minor, or some prefer to regard such a chord as an 11th on G. It is the context that decides the ear to know the chord as a dominant harmony of E♭.

XV.—C minor to E♭. MOZART.

The key of the minor 3rd above is often attacked direct, the original tonic being 6th in new key.

XV. (2)—C minor to E♭. MOZART.



XVI.—B♭ to D.

MOZART, "Don Juan."

The G♯ in bar 2 is really taken by the ear as A♭, making a dominant 7th on B♭, but it is quitted as G♯, the augumented 6th on B♭. The modulation is essentially enharmonic.

XVII.—B♭ to D.

BEETHOVEN, Op. 2.

Chord marked * supertonic minor 9th in D minor 3rd and 5th of previous chord (6th degree in D minor), retained as 7th and 9th.

XVIII.—A minor to C♯ (expressed as D♭) and back to primary key.

ROSSINI, "Stabat Mater."

The chord * is quitted as chord on flat 6th of C♯ (enharmonic equivalent of D♭). In bar 4 the D♭ † becomes C♯ leading note of D minor, through which a return is made to the original key.

XIX.—E♭ minor to G minor.

HANDEL, "Solomon."

Dominant 7th of A♭ becoming by enharmonic change augmented 6th on 6th degree in G minor.

XX.—E minor to A♭.

Song.

HAYDN, "Creation."

This extract beginning in G, passes through A minor, G, E minor, attendants of original key C. The root and 3rd of E remain as 3rd and 5th * of C (dominant of F), this resolves on chord of flat 6th, which is changed into subdominant of A♭ major, and the familiar movement of the bass establishes that key.

XXI.—B to E♭. SCHUMANN.

B (enharmonically C♭) quitted as flat 6th of new scale.

XXII.—A♭ to D and back. WAGNER "Lohengrin."

A♭ is followed by chord on flat 6th, this by major triad on C♭. The C♭ chord (enharmonically B) is changed to B minor, relative of D. D major is followed by D minor, that in turn by its relative F, the root of which * remains as a member of the added 6th on the subdominant of original key A♭.

XXIII.—D minor to A♭. BEETHOVEN, Op. 77.

Dominant minor 9th of primary key, enharmonically changed to dominant minor 9th of new key. May be expressed thus:—

XXIV.—A minor to E♭. BEETHOVEN, Op 90.

The A♭ at the beginning of the third bar of the extract, strikes the ear as G♯. The enharmonic treatment of that note as A♭ and of the B♮ as C♭, makes the last chord of bar three an inversion of a minor 9th on B♭ dominant of E♭.

XXV.—F minor to C minor. BEETHOVEN, Op. 2.

Implied 5th of first chord becomes 7th of new supertonic.

XXVI.—From E to B minor. BACH, English Suites.

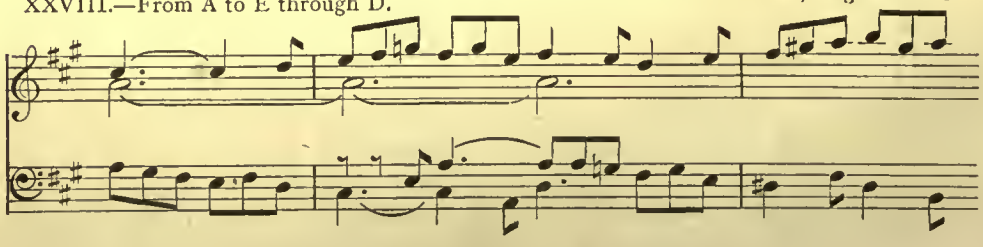
Root of first chord retained as 7th of F♯, dominant of B minor.

J. S. BACH.

XXVII.—A to E *via* B.

Passing through B, and so attacking the new key from beyond.

XXVIII.—From A to E through D. BACH, English Suite.



The converse of the former example.

XXIX.—G to D. BEETHOVEN, Finale of 2nd Symphony, arr. by HUMMEL.

The key of G has been established, but the chord, used as subdominant, would appear to proceed through G♯ (expressed as A♭), bearing an inversion of augmented 6th and so returning to primary key of D; or, the approach to the chord may be from G quitted as dominant of C minor to dominant of its relative E♭, by means of implied enharmonic treatment the chord being afterwards quitted as an inversion of augmented 6th.

XXX.—G major to D minor, afterwards changing to D major. HANDEL, Overture to "Alexander."

Compare with No. IV.

XXXI.—From A to E minor and back. HANDEL, Overture to "Julius Cæsar."

The chord of E minor, * is introduced as a chord on 2nd degree of D, and is followed by chromatic harmony on supertonic of new key.

XXXII.—A♭ minor to E. BEETHOVEN, Op. 13.

C♭ enharmonically changed to B♮, or more simply that the first chord is the chord of G♯ minor, and the second the dominant of E. (*See* page 11.)

XXXIII.—D♭ to A minor. SCHUBERT, Op. 40.

Dominant of first key becomes leading note of second key. The last A♭ of first bar is treated as G♯ leading note of next harmony.

XXXIV.—A to F, and on to E. BEETHOVEN, Op. 14.

Flat 6th of A* becomes tonic in F, and the new tonic F* is quitted as chromatic chord on flat 2nd of E. The note C† 5th of the first chord, bar 4, remaining to become minor 9th of new dominant B.

XXXV.—D to B♭. BEETHOVEN, Op. 10.

By deceptive cadence, flat 6th of original key becomes new tonic.

XXXVI.—A to F. BEETHOVEN, Op. 2.

Tonic root has minor 9th added, the 9th remains as 7th of new dominant root.

XXXVII.—D minor to B♭. BEETHOVEN, Op. 2.

The key of D minor being established the new tonic is quitted as 3rd of B♭.

XXXVIII.—E to C. BEETHOVEN, Op. 14.

Founded on a form of deceptive cadence. The minor 6th of E becomes tonic in C.

XXXIX.—A through D to B♭. BEETHOVEN, from Rondo, Op. 2.

* Fifth of chord of D remains to become 3rd of F as dominant of B♭.

XL.—A to F. SCHUBERT, Op. 27. From a March in C.

The primary key is C major. The key of A major having been reached modulation is made to F by retaining the 5th of the first chords as 3rd of the second harmony. A latent connection exists between these harmonies in the key of E major, in which the first chord would be subdominant and the second an enharmonic variation of the augmented 6th on the flat 6th of that scale.

XLI.—G to E♭. MOZART, "Don Juan." (First Finale.)

Fifth of first chord remaining as third of second chord, relationship as between dominant triad of minor key and dominant 7th of relative major, *i.e.*, as between dominant of C minor and E♭.

XLII.—G minor to E minor. BEETHOVEN, Op. 13.

Minor 9th of chord on D enharmonically changed into 3rd of chord on B.

XLIII.—B♭ to G. SCHUBERT, Op. 121.

In the above the bass note that resolves each discord, instead of bearing the expected first inversion, is made a new dominant, the 5th of each chord in turn becoming 7th of new chord. So we have a suggested but incomplete sequence of E♭, C, A.

XLIIIA.—From dominant of B to A♭. R. SCHUMANN, Op. 9.

The connection of the two keys is less remote than the notation would appear to indicate. G♯ minor is the relative of B. The major mode is substituted for the minor and expressed as A♭.

The following may make the connection of the chords more plain:—

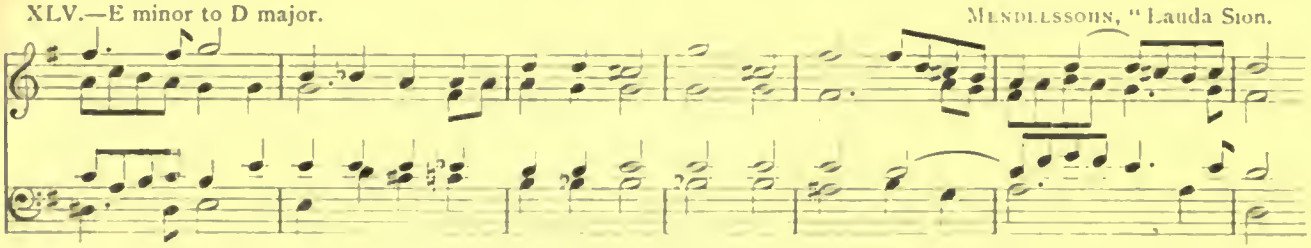
XLIIIB.

It will be seen the 3rd of the first chord remains to become the 5th of the new dominant harmony.

XLIV.—C♯ minor to D and on to B. SCHUBERT, Op. 40.

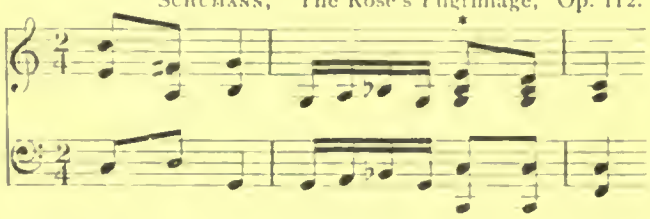
In the first case *A is taken as 6th of C♯ minor, but bearing a ♮ 7th, becomes dominant of D. In the second case the 3rd of chord of D†, becomes root of dominant of B.

XLV.—E minor to D major. MENDELSSOHN, "Lauda Sion.



The modulation is from E minor to D, through G and B minor. The harmonies in the second, third, and fourth bars are consistently possible in G, in the fifth bar by an enharmonic change of B♭ to A♯; the key of B minor is reached, and then we pass to the key of D. An allusion to the relative is a frequent incident in cadential modulation.

XLVI.—G to F (both attendants of principal key C).
SCHUMANN, "The Rose's Pilgrimage," Op. 112.



G major changed to G minor, and 3rd B♭ retained as 7th of new dominant.

XLVII.—A through F♯ minor to G♯ minor. BEETHOVEN, Scherzo, Op. 2.

First the chord of B * second in A is quitted as subdominant of F♯ minor; this is followed by † subdominant and dominant of G♯.

XLVIII.—D♭ to C minor. MOZART, from Quartet No. 9.

The chord marked *, approached as dominant of D♭, is quitted as an augmented 6th in C minor. The mass of harmony that follows is regular, although the progression of individual parts is free.

The following are examples of more extended and sequential modulations:—

XLIX.—From B♭ minor to B minor and on to C minor. W. A. Mozart. From a Violin and Piano Sonata.

B♭ as tonic in the first two bars becomes in bar 3 a new leading note (enharmonically expressed as A♯) in B minor; the note B afterwards undergoes a similar change of position, and becomes in bar 8 leading note in C minor.

L. Schubert. From Sonata, Op. 53.

The connection of harmonies in the above extract is that of the subdominant and flat 6th of a key, chord of C, chord of E♭ (bars 5 and 6). The same progression is repeated between the chords of E♭ and G♭ (bars 9 and 10). In bar 13 B♭ and D♭, enharmonic variations of A♯ and C♯, make part of the dominant chord of B minor. The chord on its 6th degree is employed as the dominant of C (bar 16).

LI. HAYDN. From Symphony in D.

G major is followed direct by G minor (bar 4). The chord on the 6th degree of G minor is established as new tonic (bars 5 to 9). The same note, E♭, in bar 11, is employed as bass of augmented 6th. D, reached as dominant, is dwelt upon for five bars beyond the present extract, and so effects the return to G major.

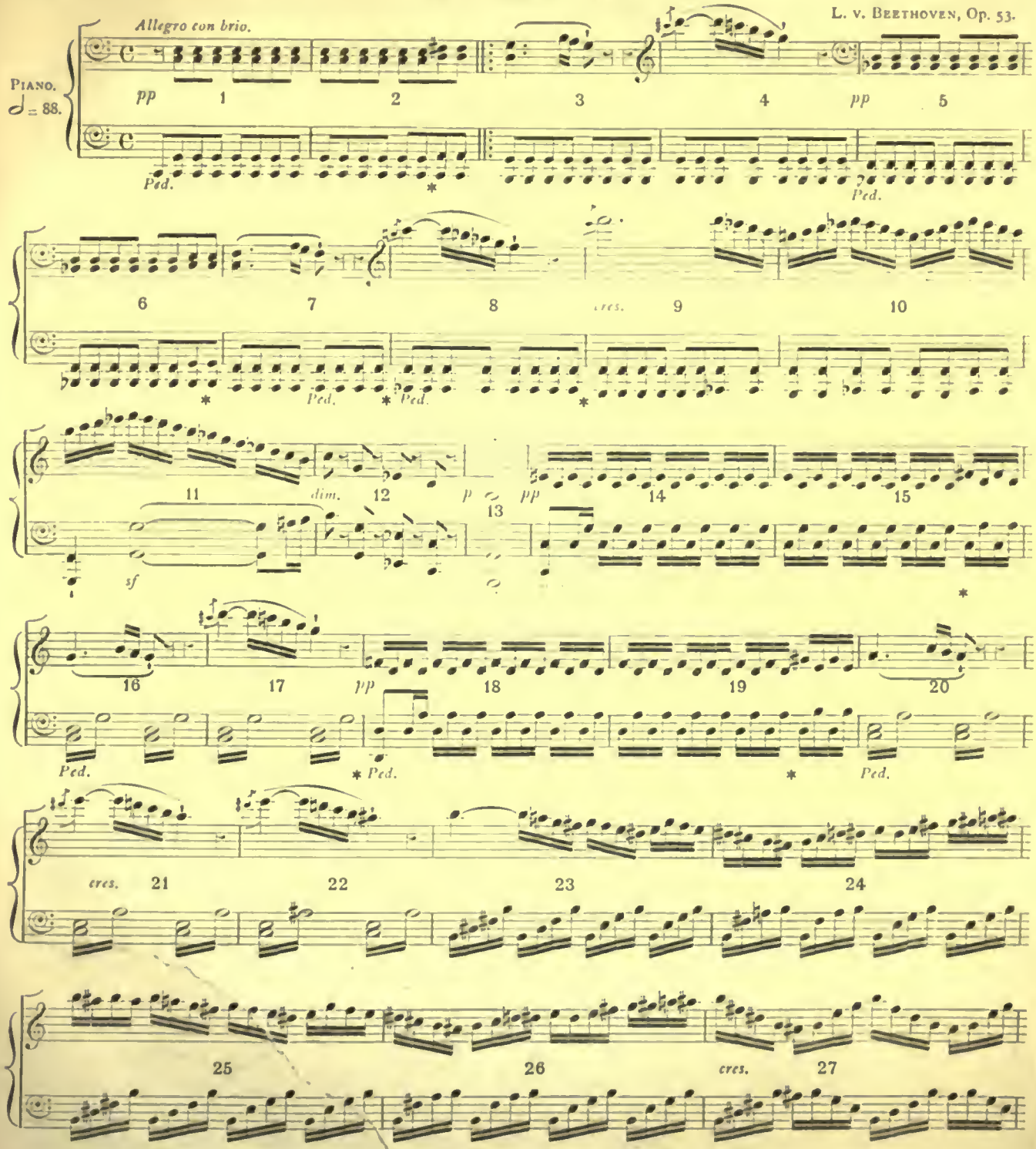
LII. BEETHOVEN, Op. 2, No. 2.

The above extract commences in the key of A minor. The G♯ part of a diminished 7th in bar 3 is quitted in the next bar as A♭ minor 9th on dominant of C. In bar 7 B is part of a diminished 7th, but in the following bar it is quitted as C♭ minor 9th, on B♭ as dominant of E♭. In bar 11 D, part of diminished 7th, remains to become in bar 12 the root of a dominant 7th in G; this note in turn bears another dominant 7th. The bass is afterwards sharpened leading to A (bar 15), as previously a dominant 7th is first employed; the bass is again raised, and we reach B minor (bar 17), and now A, employed as an 11th on E, leads through a prolonged use of dominant harmony to the principal key.

It is not enough to possess the power or skill to modulate, it is pre-eminently necessary for the musician to know *when* to modulate. As has often been pointed out, a mere senseless rambling in and out of different keys, is not in itself a source of pleasure; but the power of appreciating when variety has exhausted its means *within* a key, and the skill to glide out of the original key into some other, or by a sudden surprise to assume at the right moment a new tonality (the chord of modulation carrying its own justification to the mind of the intelligent listener)—these are among the most potent charms of modern music, and plan or design is shown at least to as great a degree in the balance and contrast of the keys chosen, in which to display manipulation of the theme, as in the thematic treatment itself.

The student is strongly advised to analyze many movements of various kinds on some plan similar to that now employed to exhibit the modulations of the first movement in Sonata C, Op. 53 (Waldstein), Beethoven, and "Dominus Deus," Mass in F, Schubert.

FIRST MOVEMENT OF WALDSTEIN SONATA, WITH NOTES ON THE MODULATIONS.



Bar 1. C major.
Bar 2—4. Dominant and tonic harmonies of G. (Modulation very transient.)
Bar 5—7. Subdominant, dominant and tonic harmonies of F. (Modulation transient.)
Bar 8—10. Approaching through minor form of subdominant.
Bar 11—12. Dominant and tonic of C minor.
Bar 13—14. Return to C major.
Bar 15—17. Dominant and tonic of G. (Compare with 2—4.)
Bar 19—21. Dominant and tonic of A minor.
Bar 22. Augmented 6th on 6th of E minor leading to
Bar 23—34. Dominant of E used as Pedal.

f sf 28 sf sf ff 29 30
p sf 31 decres. 32 p 33 cres. 34 35 dolce e molto legato. 36
37 sf 38 p 39 40 cres. 41 p 42
dolce. 43 44 cres. 45 sf 46
p 47 48 cres. 49 f 50
51 52 53 54

Bar 35—74. E major (the second subject begins in bar 35). Bars 36, 40, 44, and 48 contain avoided or deceptive cadences from dominant of C♯ minor.

Bars 64 and 65. Chromatic supertonic harmony in E. | Bars 74 and 75. Dominant and tonic of A minor

Bar 76—78. E minor.
Bar 78—80. A minor.
Bar 80—84. E minor.
Bar 84—85. C major. (At this point the "repeat" commences.)
Bar 86—90. F major.
Bar 91—92. Dominant and tonic of C major.

Bar 93. Mode changes from major to minor and the chord proves to be subdominant in G minor.
Bar 94. Dominant of G minor.
Bar 95—99. G minor.
Bar 99—103. C minor.

Bar 103—104. Dominant and tonic of F minor.
Bar 104—109. Sequence of prepared sevenths in last inversion.
Bar 110. Dominant and tonic of F minor.
Bar 111. Augmented 6th, on D♭, leading to
Bar 112—115. Prolonged use of harmony of C (dominant in F.)

Bar 116—117. F major.
Bar 118—119. F becomes dominant of B♭.
Bar 120—121. B♭.
Bar 122—123. B♭ as dominant.

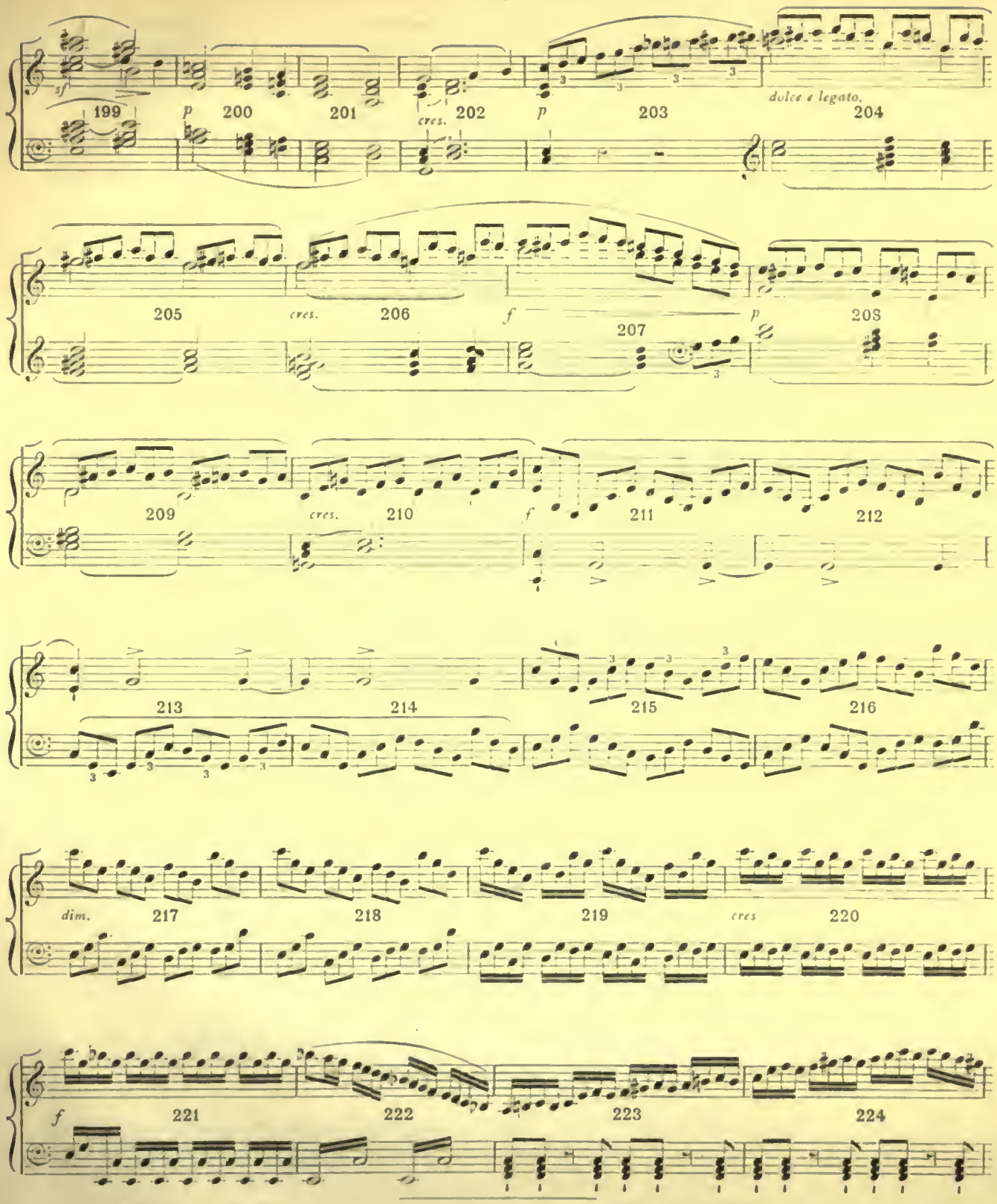
Bar 124—126. E♭ minor (second inversion). Here a change of notation occurs, B♭ being next written as A♯ and G♭ as F♯. (*See* Note, page 51.)
Bar 126—127. F♯ as dominant of B minor.
Bar 128—129. B minor.
Bar 130—131. Dominant of C.
Bar 132—133. C minor.
Bar 134. Chromatic chord on flat 2nd of C.
Bar 135. Chromatic supertonic harmony in C.
Bar 136—155. Mainly dwelling on dominant of C

Bar 156. Return to principal subject and original key.
Bar 157—159. Dominant and tonic of G.
Bar 160. Subdominant in F.
Bar 161—163. Dominant and tonic in F.
Bar 164—165. Approaching C minor.
Bar 166—167. Dominant and tonic of C minor.

Bar 168. Pause on sixth of C minor quitted as dominant in D♭.
Bar 169. Tonic in D♭.
Bar 170. Pause on B♭ as 6th of D♭, quitted as dominant of E♭.

Bar 171. E♭.
Bar 172. Chromatic harmony of D as supertonic in coming key of C.
Bar 173. Dominant of C.
Bar 174. C major

Bar 175—177. Dominant and tonic of G.
Bar 179—181. Dominant and tonic of A minor.
Bar 184—195. On E as dominant of A.
Bar 196. A major. Second subject.



Bar 200. A minor.
Bar 201—203. C major.
Bar 204—205. A minor.
Bar 206—207. C major.
Bar 208—209. A minor.
Bar 210—220. C major.
Bar 221—223. Dominant and tonic of F.

Bar 225—226. Chromatic supertonic harmony in C.
Bar 227—235. C major.
Bar 235—237. F minor.
Bar 238—239. C becoming dominant.
Bar 239—241. F major.

Bar 241—245. C major.
Bar 245—246. F.
Bar 246—248. F minor.
Bar 249—250. D♭ taken as flat 6th of F, employed as new tonic.
Bar 250—251. Dominant and tonic of A♭

Bar 252—253. Dominant and tonic of B♭ minor.
Bar 254—255. Dominant and tonic of C minor.
Bar 256—262. C with various chromatic harmonies.
Bar 262—264. Dominant and tonic of D minor.
Bar 265—267. C major.
Bar 267—268. Dominant and tonic of A minor.
Bar 269—270. C.
Bar 270—274. Sequence.

Bar 275—284. C major.
Bar 284. A minor.
Bar 285. Deceptive cadence.
Bar 286—288. C major.
Bar 288—289. A minor.
Bar 289. Deceptive cadence.

Bar 290—296. C major.
Bar 296—297. Dominant and tonic of G.
Bar 297—298. Dominant and tonic of F.
Bar 298. Chord of F minor quitted as minor form of subdominant in C.
Bar 298—300. C major.

SUMMARY OF THE MODULATORY ANALYSIS OF THE FIRST MOVEMENT OF SONATA IN C. (BEETHOVEN, OP. 53.)

BAR	
1.	C major.
2—3.	Dominant and tonic harmony of C (modulation very transitory).
5.	Subdominant of F.
6—7.	Dominant and tonic harmony of F (modulation very transitory).
8—10.	Approaching
11—12.	Dominant and tonic of C minor.
13—14.	Return to C major.
15—17.	Dominant and tonic of G (compare with 2—4).
19—21.	Dominant and tonic of A minor.
22.	Augmented 6th on 6th of E minor, leading to
23—34.	Dominant of E. Used as a pedal.
35—74.	The second subject begins in bar 35. Bars 36, 40, 44 and 48 contain avoided or deceptive cadences from dominant of C♯ minor. Bars 64 and 65, chromatic supertonic harmony in E.
74—75.	Dominant and tonic of A minor.
76—78.	E minor.
78—80.	A minor.
80—84.	E minor.
84—85.	C major (at this point the repeat commences).
86—90.	F major.
91—92.	Dominant and tonic of C major.
93.	Mode changes from major to minor, and the chord proves to be subdominant in G minor.
94.	Dominant of G minor.
95—99.	G minor.
99—103.	C minor.
103—104.	Dominant and tonic of F minor.
104—109.	Sequence of prepared 7ths in last inversion.
110.	Dominant and tonic F minor.
111.	Augmented 6th on D♭, leading to
112—115.	Prolonged use of harmony of C (dominant of F).
116—117.	F major.
118—119.	F becomes dominant of B♭.
120—121.	B♭.
122—123.	B♭ as dominant.
124—126.	E♭ minor (second inversion). Here a change of notation occurs, B♭ being next written as A♯, and G♭ as F♯.*
126—127.	F♯ as dominant of B minor.
128—129.	B minor.
130—131.	Dominant of C.
132—133.	C minor.
134.	Chromatic chord on flat 2nd of C.
135.	Chromatic supertonic harmony in C.
136—155.	Mainly dwelling on dominant of C.
156.	Return to principal subject and original key.
157—159.	Dominant and tonic of G.
160.	Subdominant in F.
161—163.	Dominant and tonic in F.
164—165.	Approaching C minor.
166—167.	Dominant and tonic C minor.
168.	Pause on 6th of C minor, quitted as dominant in D♭.
169.	Tonic in D♭.
170.	Pause on B♭ as 6th of D♭, quitted as dominant of E♭.
171.	E♭.
172.	Chromatic harmony of D as supertonic in coming key of C.
173.	Dominant of C.
174.	C major.
175—177.	Dominant and tonic of G.
179—181.	Dominant and tonic of A minor.
184—195.	On E as dominant of A.
196.	A major. The second subject.
200.	A minor.
201—203.	C major.
204—205.	A minor.
206—207.	C major.
208—209.	A minor.
210—220.	C major.
221—223.	Dominant and tonic of F.
225—226.	Chromatic supertonic harmony in C.
227—235.	C major.
235—237.	F minor.
238—239.	C becoming dominant.
239—241.	F major.
241—245.	C major.
245—246.	F.
246—248.	F minor.
249—250.	D♭ taken as flat 6th of F employed as new tonic.
250—251.	Dominant and tonic of A♭.
252—253.	Dominant and tonic of B♭ minor.
254—255.	Dominant and tonic of C minor.
256—262.	C with various chromatic harmonies.
262—264.	Dominant and tonic of D minor.
265—267.	Dominant and tonic of C.
267—268.	Dominant and tonic of A minor.
269—270.	C.
270—274.	Sequence.
275—284.	C major.
284.	A minor.
285.	Deceptive cadence.
286—288.	C major.
288—289.	A minor.
289.	Deceptive cadence.
290—296.	C major.
296—297.	Dominant and tonic of G.
297—298.	Dominant and tonic in F.
298.	Chord of F minor quitted as minor form of subdominant in C.
298—300.	C major.

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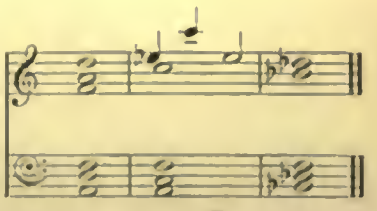
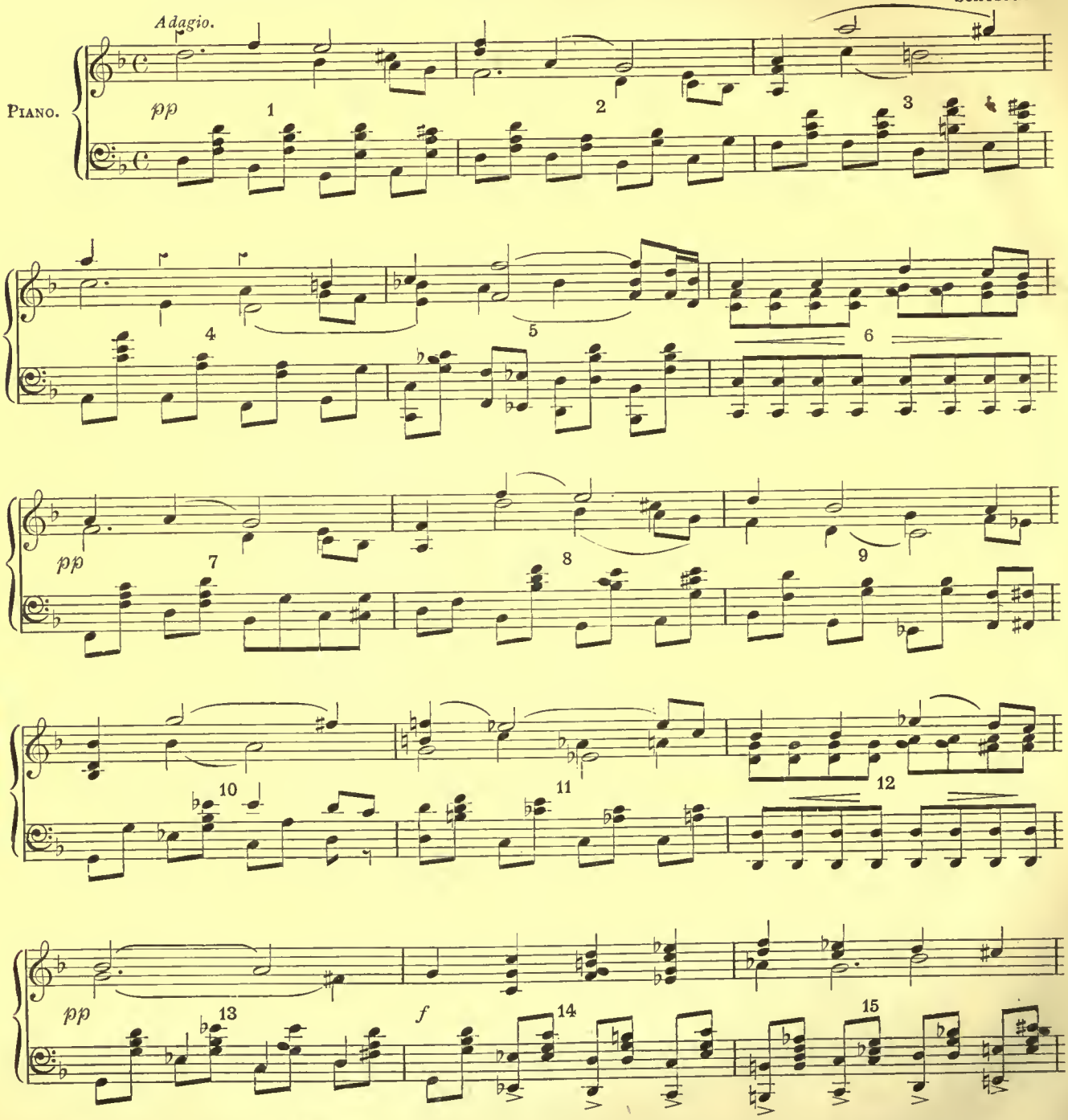
* The chord written as $\frac{6}{4}$ on B♭, in bar 125, passes by enharmonic change of B♭ to A♯, and of G♭ to F♯ to a $\frac{6}{5}$ on A♯. The remote key attained, together with the change of notation, makes this look more complex than it is in truth. Transposed to a key that does not require change of notation, this is the substance of the progression :—



E

"DOMINE DEUS," WITH NOTES ON MODULATION.

SCHUBERT.



Bar 1. D minor.
Bar 2—3. F major.
Bar 3—4. A minor (chord of G supertonic in F).
Bar 5. F major.
Bar 5. B♭ (very transitory).
Bar 6—7. F.
Bar 7—9. D minor.
Bar 9—10. G minor dominant quitted as supertonic in C.
Bar 11. C minor.
Bar 12—14. G minor.
Bar 14—15. C minor.

Bar 16. G minor.
Bar 16—19. D minor.
Bar 19—20. F major.
Bar 20—21. A minor.
Bar 22—24. D minor.

SUMMARY OF THE MODULATORY ANALYSIS OF "DOMINUS DEUS," FROM THE MASS IN F. (SCHUBERT.)

BAR	
1—2.	D minor.
2—3.	F major.
3—4.	A minor (chord of G supertonic in F).
5.	F major.
5.	B♭ (very transitory).
6—7.	F.
7—9.	D minor.
9—10.	G minor dominant (quitted as supertonic in C).

BAR	
11.	C minor.
12—14.	G minor.
14—15.	C minor.
16.	G minor.
16—19.	D minor.
19—20.	F major.
20—21.	A minor.
22—24.	D minor.

These modulations are almost exclusively to attendant keys.

CHAPTER VII.

The following pages contain modulations from C major to each diatonic and chromatic interval. Five or six different means are shown for effecting each modulation, and return modulations to C major are added in each instance.

Wherever a modulation occurs from the primary key there must be by some means a return; such return may be direct or circuitous; when direct the return modulation is seldom effected by as striking a harmony as that by which the outward modulation was introduced—in fact as the ear is better prepared for the returning tonality it does not need so much that is characteristic to justify its re-appearance; yet it is in this matter of the return that the inexperienced most often betray their want of resource.

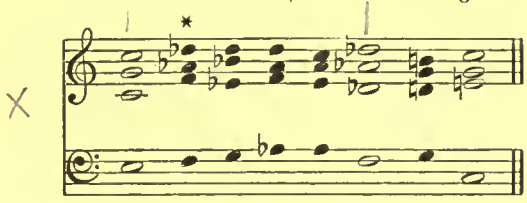
A short explanation is appended to each example. It would have been easy to have added to the length of the book by transposing these examples to start from each key, but it will be far more profitable for the student to make such transpositions for himself or herself. The modification necessary to make these modulations available to or from a minor key will be evident.

TABLES OF MODULATION FROM C TO EACH OTHER TONIC IN CHROMATIC ORDER.

In the tables which follow, the first semibreve chord in each example represents the key from which the modulation is made. This is generally given in root position, but sometimes, for convenience, the first inversion is employed. The second semibreve indicates the key reached; this and the immediately preceding chord in each case stand in the relation of tonic and dominant harmony of the new key, but the inverted positions of these chords are frequently used, as the object is merely to show the essence of the modulation: the confirmation of the modulation should be added in each case. In like manner the chords added to effect the return to the original key often require corroboration.

C TO D♭.

(Enharmonic change is indicated by the use of quaver notation.)

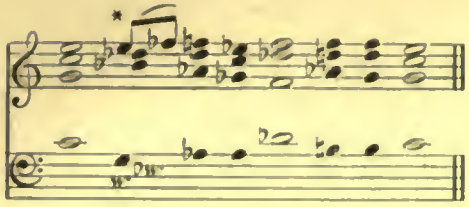


* Neapolitan 6th becomes new tonic.

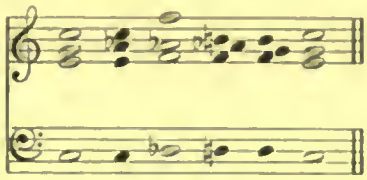
* Chromatic flat 6th of primary becomes dominant of new key, tonic of primary becomes leading note of new key.

Inversion of dominant minor 9th becomes inversion of new tonic minor 9th.

Inversion of supertonic minor 9th becomes inversion of new dominant minor 9th.



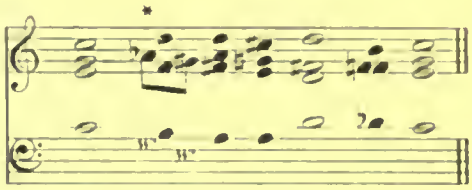
Inversion of primary tonic 9th becomes inversion of new supertonic 9th.



Minor 13th of C resolved as minor 13th of A♭.

C TO D.

3rd and 5th retained as part of new dominant.



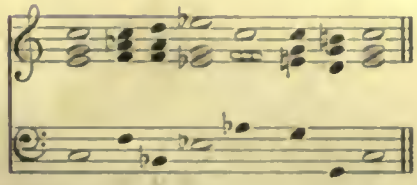
Inversion of dominant minor 9th becomes inversion of supertonic minor 9th.

Inversion of supertonic minor 9th quitted as inversion of tonic minor 9th of new key.

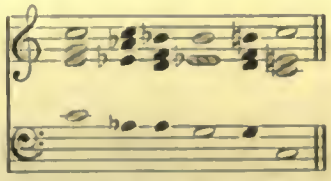
Inversion of tonic minor 9th becomes inversion of dominant minor 9th of new key.

Tonic minor 13th of primary key quitted as supertonic 13th of new key.

C TO E♭.



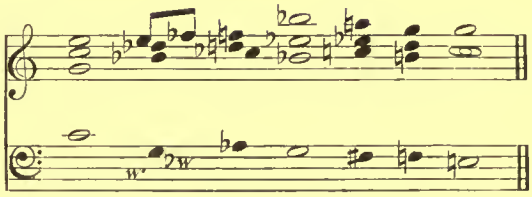
Minor form of subdominant becomes minor second of new key.



Chord on flat 6th quitted as subdominant of new key.

Inversion of dominant minor 9th quitted as another inversion of dominant minor 9th of new key.

Inversion of supertonic 9th quitted as another inversion of supertonic 9th of new key.



Inversion of tonic 9th quitted as another inversion of tonic 9th of another key.

C TO E.

Tonic of primary key, quitted as flat 6th of new key.

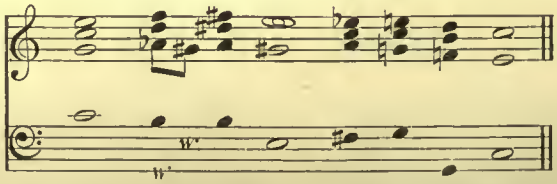
Triad on 6th of key, quitted as minor form of new subdominant.

Inversion of subdominant, quitted as Neapolitan 6th of new key.

Minor 13th of primary tonic becomes minor 13th of new key.

Inversion of supertonic 9th becomes inversion of new dominant 9th.

Inversion of tonic minor 9th becomes inversion of supertonic minor 9th.



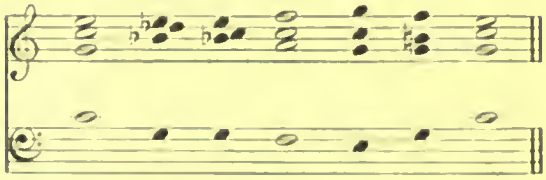
Inversion of dominant minor 9th becomes inversion of new tonic minor 9th.

C TO F.

Tonic becomes new dominant.

Dominant minor 9th becomes supertonic minor 9th.

Supertonic minor 9th becomes new tonic minor 9th.



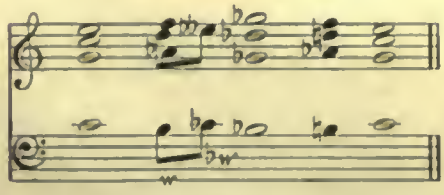
Tonic minor 9th becomes dominant minor 9th.

Minor 13th of primary tonic quitted as minor 13th of new dominant.

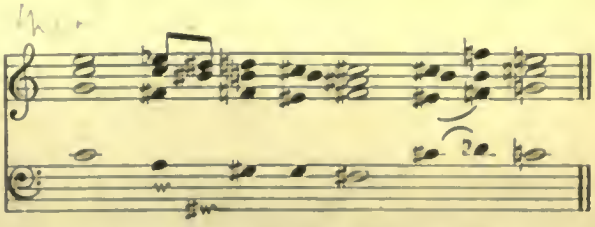
C TO F♯ (G♭).

Flat 2nd (Neapolitan 6th) quitted as dominant of new key.

Dominant triad quittted as that on flat 2nd of new key.



Inversion of dominant minor 9th becomes inversion of dominant minor 9th of new key.



Inversion of supertonic minor 9th quitted as inversion of supertonic minor 9th of new key.

Inversion of tonic minor 9th quitted as another inversion of tonic minor 9th of new key.

Minor 13th of primary tonic quitted as supertonic minor 13th of new key.

C TO G.

Tonic quitted as subdominant of new key.

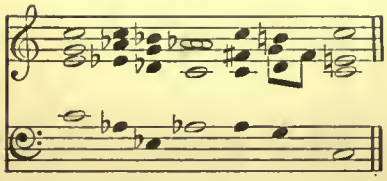
Flat 6th of primary becomes flat 2nd of new key.

Supertonic minor 9th of primary quitted as dominant minor 9th of new key.

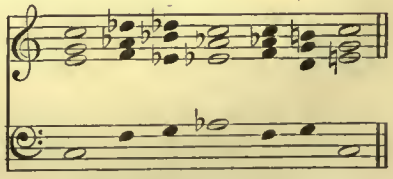
Tonic minor 9th becomes supertonic minor 9th of minor 9th of new key.

Dominant minor 9th quitted as tonic minor 9th of new key.

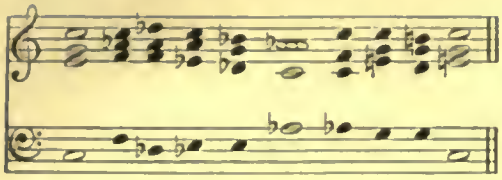
C TO A♭.



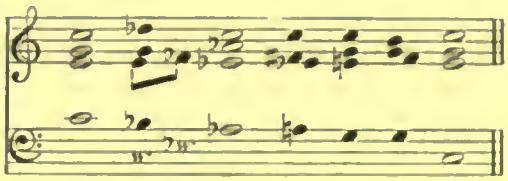
Chromatic chord on flat 6th quitted as new tonic.



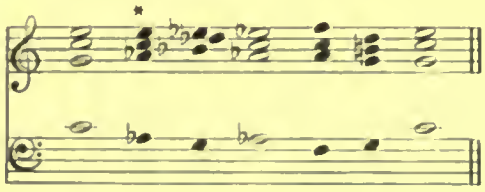
Neapolitan 6th quitted as inversion of new subdominant.



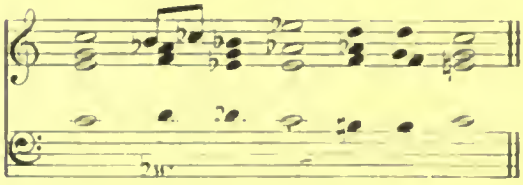
Minor form of subdominant quitted as 6th of new key.



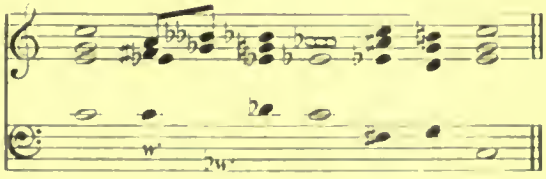
Inversion of tonic minor 9th quitted as inversion of dominant minor 9th of new key.



Tonic minor 13th of primary key quitted as tonic minor 13th of new key.



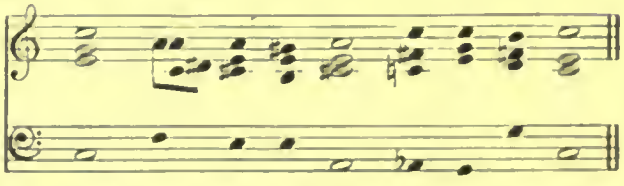
Inversion of dominant minor 9th quitted as inversion of supertonic minor 9th.



Inversion of supertonic minor 9th quitted as inversion of tonic minor 9th of new key.

C TO A.

Chromatic supertonic triad quitted as subdominant of new key.



Subdominant becomes flat 6th of new key and bears augmented 6th.

Third of primary key retained as root of dominant of new key.

Tonic minor 13th of primary quitted as dominant minor 13th of new key.

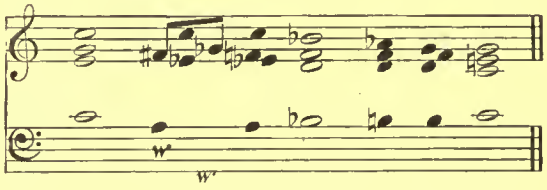
Inversion of dominant minor 9th becomes another inversion of dominant minor 9th of new key.

Inversion of supertonic minor 9th becomes inversion of tonic minor 9th of new key.

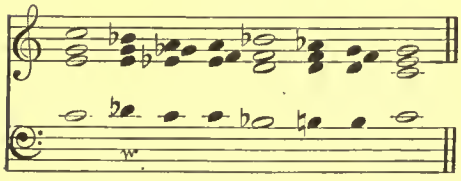
Inversion of tonic minor 9th becomes another of tonic minor 9th of new key.

C TO B♭.

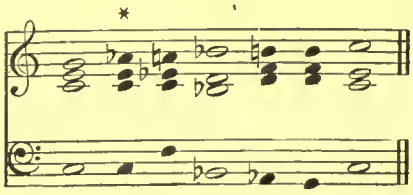
Tonic of primary key quitted as chromatic supertonic triad of new key. Retained note.



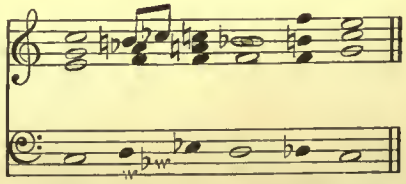
Inversion of supertonic minor 9th quitted as inversion of dominant minor 9th of new key.



Inversion of tonic minor 9th quitted as inversion of supertonic of new key.



Tonic minor 13th of primary key quitted as supertonic of new key.

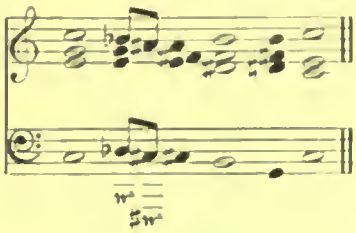


Inversion of dominant minor 9th quitted as inversion of tonic minor 9th of new key.

C TO B.

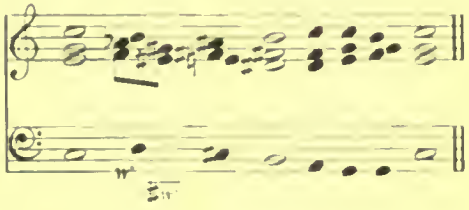
First inversion of tonic triad quitted as Neapolitan 6th of new key

Dominant 7th of primary becomes augmented 6th of new key.



Inversion of tonic minor 9th quitted as inversion of dominant minor 9th.

Inversion of supertonic minor 9th quitted as inversion of tonic minor 9th.

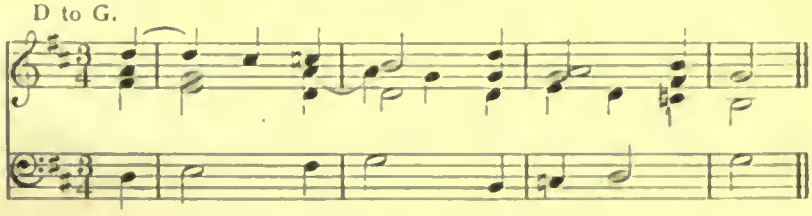


Inversion of dominant minor 9th quitted as inversion of supertonic of new key.

EXERCISES IN MODULATION.

The student should now work the following exercises. In doing this, it will be desirable to extend each exercise into a regular phrase, say of four bars; the modulation, if made early in the phrase, should be duly confirmed, and care taken to attain variety in the approach of the cadence. It will be found useful to work in various rhythms: the following may illustrate what is meant:—

D to G.



D to B♭.

Exercise 1. Name the attendant keys of A, B, and E♭ major, and of G, B♭, and F♯ minor.

2. Quit this chord (given as tonic in A♭)

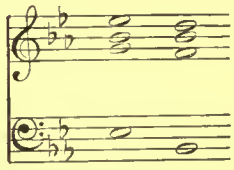
(*a*) As a subdominant chord.
(*b*) As a dominant chord.
(*c*) As chord on sixth of that minor key to which it diatonically belongs.
(See example 20.)

3. Quit the second chord (given as subdominant)

(*a*) As a tonic chord.
(*b*) As a dominant chord.
(*c*) As chord on sixth of that minor key to which it diatonically belongs.
(See example 21.)

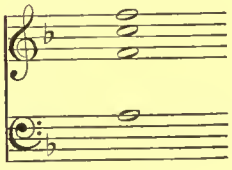
4. Quit the second chord (given as dominant)

(*a*) As a tonic chord.
(*b*) As a subdominant chord.
(*c*) As 6th of that minor key to which it diatonically belongs.
(See example 22).



5. Quit this chord (given as an inversion of tonic)

(*a*) As an inversion of chord on flat 2nd of key (Neapolitan 6th).
(*b*) As chromatic supertonic harmony of a new key.
(*c*) As harmony of flat 6th of a new key.
(See example 23.)

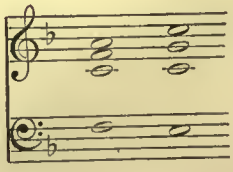


6. Quit the second chord (given as inversion of subdominant harmony)

(*a*) As inversion of chord on flat 2nd of a key (Neapolitan 6th).
(*b*) As chromatic supertonic harmony of a new key.
(*c*) As harmony of flat 6th of a new key.
(See example 24).

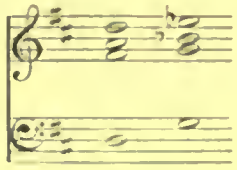
7. Quit the second chord (given as inversion of dominant harmony)

(*a*) As chord on flat 2nd of a key (Neapolitan 6th).
(*b*) As chromatic supertonic harmony of a new key.
(*c*) As harmony on flat 6th of a new key.
(See example 25).



8. Quit the second chord (given as chromatic harmony of flat 2nd)

(*a*) As tonic harmony of new key.
(*b*) As subdominant harmony of new key.
(*c*) As dominant harmony of new key.
(*d*) As 6th of minor key to which it diatonically belongs.
(See example 26).

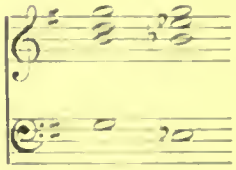


9. Quit the second chord (given as chromatic chord on the supertonic)

(*a*) As tonic of a new key.
(*b*) As subdominant of new key.
(*c*) As dominant of new key.
(*d*) As flat 6th of a new key.
(See example 27).

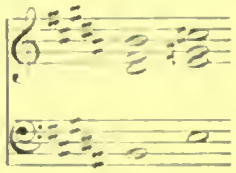
10. Quit the second chord (given as chord on flat 6th of key)

(*a*) As tonic of new key.
(*b*) As subdominant of new key.
(*c*) As dominant of new key.
(See example 28).



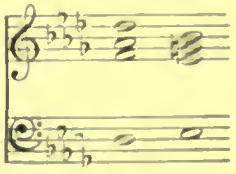
11. Quit the second chord (given as inversion of chromatic chord on flat 2nd)

(*a*) As chromatic supertonic.
(*b*) As flat 6th.
(See example 29).



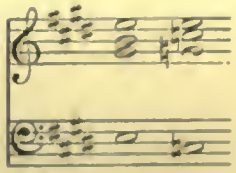
12. Quit the second chord (given as chromatic supertonic)

(*a*) As flat second of a key.
(*b*) As flat 6th of a key.
(See example 30).

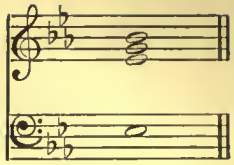


13. Quit the second chord (given as chord on flat 6th)

(*a*) As flat 2nd.
(*b*) As chromatic supertonic.
(See example 31).



14. Convert each note of the given chord successively into root, 3rd, 5th, or 7th of a dominant 7th, and resolve.



(See examples 32—34).

15. Modulate from chord of B♭ to D♭, D, and E major, use but one intermediate concord, and proceed to 7th by a retained note.

(See example 35.)

16. Modulate from B major through B minor to relatives of B minor.

(See example 36.)

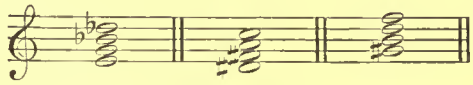
17. Modulate from C minor through C major to relatives of C major.

(See example 38.)

18. Modulate from B♭ through E♭ minor (minor form of subdominant) to relatives of E♭ minor.

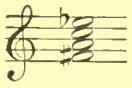
(See example 40.)

19. Modulate from B minor through F♯ (dominant of B minor) to relatives of F♯.

20. Enharmonically vary each of these diminished 7ths.  Mark each root and resolve each chord

(*a*) As dominant. (*b*) As supertonic. (*c*) As tonic discord.

(See examples 42—46.)

21. From given chord,  modulate by one intermediate chord to each of the twelve major and minor keys.

(See examples 43—46.)

22. Modulate from D to E, F, and A, by diminished 7th on leading note of new key, showing the same chord in relation to the primary key by enharmonic variation.

(See example 42, and Modulations, pp. 54—61.)

23. Modulate from B♭ to A, G, and F♯, by diminished 7th on raised subdominant of new key, showing that chord first as it would be expressed in relation to the primary key.

(See example 42, and Modulations, pp. 54—61.)

24. Modulate from A to C, E, and E♭, by diminished 7th on 3rd of new key, showing that chord first as it would be expressed in relation to the primary key.

(See example 42, and Modulations, pp. 54—61.)

25. Modulate from E♭ to D♭, G to A♭, and A♭ to D, in each case by dominant minor 13th of primary key.

(See examples 53—55.)

26. Modulate from D minor to E♭, A to E♭, and G to E♭, in each case by enharmonic variation of an augmented 6th in primary key.

(See example 56.)

27. Modulate from F to B, G to B, and G to F♯, in each case by enharmonic variation of a dominant, supertonic or tonic chromatic 7th.

(See example 57.)

28. Mention all the possible functions, within one key, of each note of a chromatic scale.

29. Show at least four modes of modulation to every other key from D, E, F♮, and A♭.

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